

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

---

In re: Methyl Tertiary Butyl Ether ("MTBE")  
Products Liability Litigation

**Master File No. 1:00 – 1898**  
**MDL 1358 (SAS)**  
**M21-88**

This Document Relates To:

The Honorable Shira A. Scheindlin

*Orange County Water District v. Unocal Corporation,*  
*et al.*, Case No. 04 Civ. 4968 (SAS)

---

**DECLARATION OF PETER C. CONDRON IN SUPPORT OF MEMORANDUM OF  
LAW OF DEFENDANTS ATLANTIC RICHFIELD COMPANY, BP WEST COAST  
PRODUCTS LLC, BP PRODUCTS NORTH AMERICA, INC., ARCO CHEMICAL  
COMPANY, LYONDELL CHEMICAL COMPANY, SHELL OIL COMPANY,  
EQUILON ENTERPRISES LLC, TEXACO REFINING AND MARKETING INC.,  
TESORO CORPORATION, TESORO REFINING AND MARKETING COMPANY,  
UNION OIL COMPANY OF CALIFORNIA, VALERO MARKETING AND SUPPLY  
COMPANY, VALERO REFINING COMPANY—CALIFORNIA, AND ULTRAMAR  
INC. IN SUPPORT OF THEIR MOTION FOR SUMMARY JUDGMENT  
DUE TO LACK OF INJURY AND DAMAGES AT CERTAIN TRIAL SITES**

PETER C. CONDRON, under penalty of perjury, declares as follows:

1. I am an attorney with the law firm of Sedgwick LLP, counsel for defendants Shell Oil Company, Equilon Enterprises LLC, and Texaco Refining and Marketing Inc. in this matter. I make this declaration in support of certain defendants' motion for summary judgment on four of the designated focus trial sites: the former Beacon Bay Auto Wash at 10035 Ellis Avenue, Fountain Valley ("Beacon Bay FV"); Unocal #5399, 9525 Warner Avenue, Huntington Beach ("Unocal #5399"); Unocal #5123, 14972 Springdale Street, Huntington Beach ("Unocal #5123"); and Thrifty 368, 6311 Westminster Boulevard, Westminster ("Thrifty 368"). I am familiar with the facts stated herein and would testify to them if called upon to do so.
2. Attached hereto as Exhibit 1 is an excerpt from the expert report of Anthony Brown, submitted on behalf of plaintiff Orange County Water District ("OCWD") in this matter.
3. Attached hereto as Exhibit 2 is a chart prepared by Mr. Brown and presented to

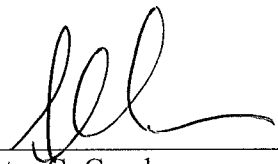
*DRAFT – 5.12.14  
PRIVILEGED & CONFIDENTIAL  
ATTORNEY WORK PRODUCT*

defendants at his deposition, at which the chart was marked as Exhibit 36.

4. Attached hereto as Exhibit 3 are excerpts from the deposition of Anthony Brown in this matter, which was taken on December 29, 2011, December 30, 2011, January 2, 2012, January 3, 2012, February 1, 2012 and February 6, 2012.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Washington, D.C., this 6th day of June, 2014.

Respectfully submitted,

  
\_\_\_\_\_  
Peter C. Condon

# Exhibit 1



May 31 2011  
7:06PM

## **Expert Report of Anthony Brown and Robert Stollar**

Prepared for

**Miller, Axline & Sawyer**

1050 Fulton Avenue, Suite 100  
Sacramento, California 95825-4272

May 28, 2011

United States District Court  
Southern District of New York

In re: Methyl Tertiary Butyl Ether ("MTBE") Products Liability Master File No. 1:00-1898  
Litigation MDL 1358 (SAS)  
M21-88

This Document Relates To:

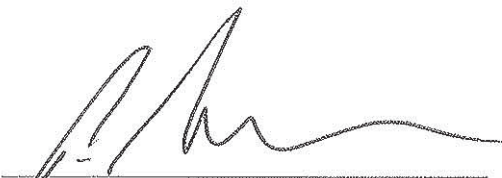
Orange County Water District v. Unocal Corp., et al.,  
No. 04 Civ. 4968

## Expert Report of Anthony Brown

Prepared for

**Miller, Axline & Sawyer**  
1050 Fulton Avenue, Suite 100  
Sacramento, California 95825-4272

May 28, 2011

  
Signature

MAY 28, 2011  
Date

1503 South Coast Drive, Suite 203  
Costa Mesa, CA 92626

## **Section 1:**

## **Opinion of Anthony Brown**

---

### **1.1 Introduction**

This written report is submitted in compliance with the disclosure requirements set forth in FRCP 26(2)(B), subject to the right to supplement the report in accordance with FRCP 26(e)(2). This report focuses on an evaluation of releases of methyl tertiary-butyl ether (MTBE) and tert-butyl alcohol (TBA) from twenty-six (26) gasoline service stations (facilities) within the Coastal Plain of Orange County, California. These facilities have impacted the groundwater resources managed by the Orange County Water District (OCWD).

### **1.2 Qualifications**

#### ***Education***

I hold a B.A. Degree with Honors in Geography (1985) from King's College, University of London, a M.Sc. in Engineering Hydrology (1988) from the Imperial College of Science, Technology and Medicine (Imperial College), University of London, and a D.I.C. in Civil Engineering (1988) from Imperial College.

#### ***Professional Experience***

I have 20+ years of experience as an environmental and water resources consultant. During this period, I have managed or directed an extensive number of contaminant investigations and remediation programs including facilities with multiple responsible parties, complex hydrogeology and fate and transport, multiple contaminants, and co-mingled plumes. A substantial portion of my work has been performed on studies related to the assessment and remediation of water resources impacted by gasoline constituents, such as the fuel oxygenates MTBE and TBA.

My curriculum vitae, including a list of publications authored in the prior ten years and cases in which I served as an expert within the prior four years, is provided in Appendix A. A schedule of my compensation regarding this matter is also included in Appendix A.

The exhibits that will be used to summarize or support the opinions expressed in this report are the exhibits which appear in, or are transmitted with, this report. The exhibits may subsequently be revised to allow for presentation in a manner appropriate to the proceeding where they are used. I reserve the right to update my opinion as new information becomes available••

### **1.3 Opinions and Basis of Opinions**

For the facilities subject to this phase of litigation, the available facility specific documents indicate the following:

1. MTBE and/or TBA have been released at the facilities.
2. MTBE and/or TBA releases have impacted soil and groundwater beneath the facility and off-site beyond the facility boundaries.
3. MTBE has been present in groundwater at the facility for more than a decade.

4. MTBE has migrated off-site, beyond the facility boundaries, through groundwater movement.
5. At most facilities, MTBE that has migrated off-site has comingled with releases from nearby facilities.
6. To date, the responsible parties have failed to delineate MTBE and/or TBA contamination in groundwater laterally or vertically, and additional investigation is required.
7. Remediation performed to date has failed to effectively address on-site and/or off-site groundwater contamination, and has failed to prevent off-site migration of MTBE in groundwater.
8. Additional on-site and/or off-site remediation of groundwater is required to i) prevent additional migration of MTBE and/or TBA contamination through groundwater, ii) restore the groundwater resources managed by the OCWD, and iii) eliminate the threat to drinking water supplies.
9. The OCWD will need to implement additional investigation and remediation activities at these facilities to mitigate the ongoing threat to the drinking water resources managed by the OCWD.
10. The absence of full plume delineation inhibits comprehensive estimates of the scope and cost of required remediation at all facilities. At a minimum, however, the cost of additional investigation will be no less than \$79,050 per facility. Unit costs for subsequent investigation activities have also been developed.
11. At select facilities, the minimum scope and cost to implement the required remediation can be estimated based on currently available data. For the facilities referred to as G&M Oil #4 and ARCO 1905, the cost to implement the minimum scope of investigation and remediation is \$13,229,611 and \$3,186,627, respectively.
12. The scope and costs developed for investigation and remediation activities at G&M Oil #4 and ARCO 1905 can be used as a basis to reasonably estimate the scope and costs for the additional remediation required at other facilities, once additional investigation has been performed at these facilities.

It has been assumed that the responsible parties will continue to perform periodic monitoring and sampling of existing groundwater monitoring wells•

Facility-specific opinions, and the basis for each opinion, are provided in Appendices B (parts B.1 through B.26).

Plumes of MTBE and TBA contaminated groundwater have, and continue to, migrate beyond the facility boundaries. This off-site contamination can be abated before it reaches drinking water wells. While the cost to remediate the MTBE and TBA emanating from each facility will be significant, the cost to address the contamination once it reaches drinking water wells, including operational costs, would be far greater.

An approach to remediating facilities has been developed based on G&M Oil #4 and ARCO 1905 (Feasibility Studies in Appendices C.1 and C.2 and Remedial Action Plans in Appendices D.1 and D.2) along with reasonable costs to implement the abatement (Appendices E.1 and E.2). However, it should be noted that the full lateral and vertical extent of contamination at these facilities is not known. Therefore, the costs to fully investigate the contamination at these facilities will likely be more than the costs presented to address the currently known extent of contamination. That is, the costs presented herein are conservative.

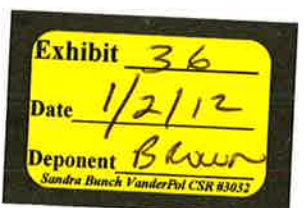
# **Exhibit 2**



Facility	Address	City	It is more likely than not that:																					
			Releases of MTBE have occurred at the facility?	Releases of TBA have occurred at the facility?	MTBE has impacted soil and groundwater beneath the facility and off-site beyond the facility boundaries?	TBA has impacted soil and groundwater beneath the facility and off-site beyond the facility boundaries?	Groundwater contamination has migrated off-site and commingled with releases from nearby facilities (focus stations)?	To date, investigations have failed to delineate historical MTBE contamination in groundwater laterally?	Currently, investigations have failed to delineate on-site MTBE contamination in groundwater laterally?	To date, investigations have failed to delineate MTBE in groundwater vertically?	To date, investigations have failed to delineate historical TBA contamination in groundwater laterally?	Currently, investigations have failed to delineate on-site TBA contamination in groundwater laterally?	To date, investigations have failed to delineate TBA in groundwater vertically?	MTBE contamination in groundwater exists beyond the current monitoring network?	TBA contamination in groundwater exists beyond the current monitoring network?	Remediation performed to date has failed to effectively address on-site groundwater contamination?	Remediation performed to date has failed to effectively control the off-site migration of groundwater contamination?	Remediation performed to date has failed to effectively remediate off-site groundwater contamination?	Additional off-site investigation is required?	Investigation of deeper groundwater zones is required?	Additional on-site remediation of groundwater is required?	Additional off-site remediation of groundwater is required?	Releases pose a threat to deeper aquifers?	Releases at the facility pose a threat to water supply wells?
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Arco 1887	16742 Beach Blvd.	Huntington Beach	Y	Y	Y	Y	P (G&M Oil #4)	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	P	Y	Y	
G&M Oil #4	16990 Beach Blvd.	Huntington Beach	Y	Y	Y	Y	N	Y	N	Y	P	N	P	Y	N	N	Y	Y	Y	N	Y	Y	Y	
Texaco 8520	8520 Warner Ave.	Huntington Beach	Y	Y	Y	Y	P (Shell 204359403)	Y	N	Y	Y	N	Y	Y	Y	P	Y	Y	P	Y	Y	Y	P	
Shell 204359403	8471 Warner Ave.	Huntington Beach	Y	P	Y	Y	P (Texaco 8520)	Y	N	Y	P	N	P	Y	P	N	Y	Y	Y	N	P	Y	P	
Texaco 121681	9475 Warner Ave.	Huntington Beach	Y	Y	Y	Y	P (Unocal 5399)	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	P	Y	P	
Unocal 5399	9525 Warner Ave	Huntington Beach	Y	P <sup>(1)</sup>	Y	P <sup>(1)</sup>	P (Texaco 121681)	Y	P <sup>(2)</sup>	Y	P <sup>(1)</sup>	P <sup>(1)</sup>	P <sup>(1)</sup>	P	P <sup>(1)</sup>	N	Y	Y	Y	N	P	P	N	
ARCO 1912	18480 Brookhurst St.	Fountain Valley	Y	Y	Y	Y	Thrifty 383 Beacon Bay Auto Wash FV	Y	N	Y	Y	N	Y	Y	P	Y	Y	Y	Y	P	Y	Y	P	
ARCO 1905	18025 Magnolia St.	Fountain Valley	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	
Thrifty 383	18520 Brookhurst St	Fountain Valley	Y	Y	Y	Y	ARCO 1912 Beacon Bay Auto Wash FV	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	P	Y	P	
Beacon Bay Auto Wash FV	10035 Ellis Ave.	Fountain Valley	Y	Y	Y	Y	Thrifty 383 ARCO 1912	Y	N	Y	Y	Y	Y	P	P	N	Y	Y	Y	N	P	P	P	
G&M Oil #24	3301 S Bristol St.	Santa Ana	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	P	
Beacon Bay Auto Wash SA	1501 W MacArthur Blvd.	Santa Ana	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	P	Y	P	
Chevron 1921	3801 S. Bristol St.	Santa Ana	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	Y	P	
ARCO 3085	3361 S Bristol St.	Santa Ana	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	N	Y	Y	N	P	Y	P		
Chevron 9-5401	5992 Westminster Blvd.	Westminster	Y	Y	Y	Y	Westminster Shell	Y	N	P	Y	N	P	Y	Y	Y	Y	Y	Y	P	Y	P	P	
Unocal 5123	14972 Springdale St	Huntington Beach	Y	Y	Y	Y	P (Huntington Beach Arco)	N	N	P <sup>(3)</sup>	Y <sup>(3)</sup>	N	Y <sup>(3)</sup>	P <sup>(3)</sup>	Y <sup>(3)</sup>	P <sup>(3)</sup>	Y <sup>(3)</sup>	P <sup>(3)</sup>	Y <sup>(3)</sup>	Y	P <sup>(3)</sup>	P <sup>(3)</sup>	P	
Shell 6502	6502 Bolsa Ave.	Huntington Beach	Y	Y	Y	Y	N	N	N	Y	N	N	Y	N	N	N	Y	N	N	N	Y	N	N	
Thrifty 368	6311 Westminster Blvd.	Westminster	Y	Y	Y	Y	Unocal 5226	N	N	Y	N	N	Y	N	N	N	P	N	N	N	Y	N	P	
Unocal 5226	6322 Westminster Ave	Westminster	Y	Y	Y	Y	Thrifty 368	Y	N	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	P	Y	Y	
Westminster Shell	5981 Westminster Blvd	Westminster	Y	P	Y	Y	Chevron 9-5401	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	P	Y	P	
Huntington Beach Arco	6002 Bolsa Ave.	Huntington Beach	Y	Y	Y	Y	P (Unocal 5123)	Y	N	Y	Y	N	Y	Y	Y	N	Y	P	Y	N	P	Y	P	
USA Gasoline 141	14600 Edwards St	Westminster	Y	Y	Y	Y	N	N	N	Y	N	N	Y	P	Y	N	P	P	N	Y	N	N	N	
Conoco Phillips 5792	4002 Ball Rd	Cypress	Y	P	Y	P	N	Y	N	Y	N	N	Y	Y	N	N	Y	P	Y	N	P	Y	Y	
ARCO 6036	13142 Goldenwest St.	Westminster	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	P	P	N	P	P	Y	N	P	Y	P	
Chevron 9-5568	12541 Seal Beach Blvd.	Seal Beach	Y	P	Y	Y	N	N	N	Y	N	N	Y	N	N	Y	P	P	N	Y	N	P	P	
World Oil 39	3450 Ball Road	Anaheim	Y	P	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	P	Y	P	

## Notes

Y	Yes
N	No
P	Possible
P <sup>(1)</sup>	Possible (No analysis for TBA has been performed at this facility)
P <sup>(2)</sup>	No analysis for MTBE since 1997
Y/P <sup>(3)</sup>	Deeper zones
MTBE	methyl tert-butyl ether
TBA	tert-butyl alcohol



# Exhibit 3

Anthony Brown

Page 185

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

IN RE: METHYL TERTIARY BUTYL ETHER ("MTBE")  
PRODUCTS LIABILITY LITIGATION  
MDL No. 1358 (SAS)

This Document Relates to:

ORANGE COUNTY WATER DISTRICT  
v. UNOCAL CORPORATION, et al.,  
Case No. 04 CIV.4968 (SAS)

---

-- -- --

FRIDAY, DECEMBER 30, 2011

-- -- --

Videotaped Deposition of ANTHONY BROWN,  
Expert Witness, Volume II, held at the Law Offices of  
Arnold & Porter, 777 S. Figueroa Street, Suite 4400,  
Los Angeles, California, beginning at 9:10 a.m.,  
before Sandra Bunch VanderPol, FAPR, RMR, CRR, CSR  
#3032

-- -- --

---

GOLKOW TECHNOLOGIES, INC.  
877.370.3377 ph|917.591.5672 fax  
Deps@golkow.com

Anthony Brown

Page 214	Page 216
<p>1 BY MR. DUCHESNEAU:</p> <p>2 Q. How could you determine whether or</p> <p>3 not there -- strike that.</p> <p>4 How could you determine the -- why there is</p> <p>5 a discrepancy between Exhibit 21 and Exhibit 18?</p> <p>6 A. I could make a quick phone call to</p> <p>7 Mr. Eisen, who compiled this Summary Table.</p> <p>8 Q. Okay. Maybe we will do that at a --</p> <p>9 at a break at some point in time.</p> <p>10 A. Sure.</p> <p>11 Q. And if you -- this might be affected</p> <p>12 by the significance of the gradient, I would imagine,</p> <p>13 of the number used in Item No. 30 -- strike that.</p> <p>14 Let me ask you this: Go down to now Item 33</p> <p>15 in your chart.</p> <p>16 A. Yes.</p> <p>17 Q. And you have your -- what you</p> <p>18 indicated as what is the estimated advective solute</p> <p>19 transport velocity in the first aquifer.</p> <p>20 What is advective solute transport velocity?</p> <p>21 A. Essentially, it's the unretarded</p> <p>22 velocity of groundwater moving through the aquifer</p> <p>23 materials.</p> <p>24 Q. So in kind of layman's terms, it's</p> <p>25 how fast the groundwater would move underneath the</p>	<p>1 how long contamination may have taken to migrate from</p> <p>2 one location to another at the facility -- at the</p> <p>3 site?</p> <p>4 A. Other than the calculations we have</p> <p>5 discussed, not that I'm aware of.</p> <p>6 Q. Okay. So just only calculating the</p> <p>7 values for the gradient and the velocities, correct?</p> <p>8 A. Correct.</p> <p>9 Q. Now, also as part of Exhibit 21, you</p> <p>10 have a diagram which I believe you referred to it as</p> <p>11 a rose diagram concerning flow direction.</p> <p>12 If you can take that out. And I see you do</p> <p>13 have that in front of you.</p> <p>14 A. Yes.</p> <p>15 Q. And in looking at this diagram</p> <p>16 concerning the station, maybe you could explain to me</p> <p>17 what it represents.</p> <p>18 A. Certainly, yes.</p> <p>19 We could imagine that this rose diagram</p> <p>20 would resemble a compass, where around the outside of</p> <p>21 the rose diagram it has the directions. So north</p> <p>22 through east, south, west, and increments between</p> <p>23 those directions.</p> <p>24 And then the axis from the center out to the</p> <p>25 edge of the circle is the number of times the flow</p>
Page 215	Page 217
<p>1 site at that depth?</p> <p>2 A. Correct. And realistically, it's the</p> <p>3 fastest rate at which the groundwater would move.</p> <p>4 Q. Okay. And that rate, it takes into</p> <p>5 account the hydraulic gradient in its calculation,</p> <p>6 right?</p> <p>7 A. Correct.</p> <p>8 Q. All right. So we might have to go</p> <p>9 back and revisit, depending on what your response is</p> <p>10 when you make your phone call.</p> <p>11 A. Certainly, yes. I can confirm</p> <p>12 whether these numbers are, in fact, still correct or</p> <p>13 whether they need to be adjusted.</p> <p>14 Q. Okay. That aside, in terms of the</p> <p>15 particular value right now for the gradient or the</p> <p>16 velocity, have you attempted to prepare any estimates</p> <p>17 as to how long it may have taken contamination at the</p> <p>18 site to migrate from one location to the other?</p> <p>19 A. No.</p> <p>20 MS. O'REILLY: Vague and ambiguous.</p> <p>21 Go ahead.</p> <p>22 THE WITNESS: No.</p> <p>23 BY MR. DUCHESNEAU:</p> <p>24 Q. Okay. And has anybody on your staff</p> <p>25 attempted to do any calculations or estimates as to</p>	<p>1 direction was reported in that particular compass</p> <p>2 direction.</p> <p>3 So, for example, if we consider the</p> <p>4 southerly direction, we can see that a southerly flow</p> <p>5 direction was reported 20 times in the documents</p> <p>6 reviewed for the USA Gasoline Service Station 141;</p> <p>7 whereas, for a southwesterly direction, it was</p> <p>8 reported 15 times, and even for a northerly direction</p> <p>9 just once.</p> <p>10 Q. So the -- the data that goes into</p> <p>11 this rose diagram comes out of the site documents for</p> <p>12 the investigation of the station?</p> <p>13 A. That is correct. Taken directly from</p> <p>14 the documents prepared by consultants for USA</p> <p>15 Gasoline.</p> <p>16 Q. And have you formulated your own</p> <p>17 opinion with regard to the flow direction of</p> <p>18 groundwater in the vicinity of the station?</p> <p>19 A. My opinion is based on the reported</p> <p>20 information from the consultants' reports. And that</p> <p>21 the groundwater flow would be between southerly and</p> <p>22 west-southwesterly. On an average, it appears that</p> <p>23 it would probably be in a generally southwesterly</p> <p>24 direction. And then I believe we reported in my</p> <p>25 expert report on page 11, under Section 2.2, "Local</p>

9 (Pages 214 to 217)

Anthony Brown

Page 218	Page 220
<p>1 Hydrogeology."</p> <p>2 Q. All right. Let me turn your</p> <p>3 attention to page 8 of your initial report that's</p> <p>4 Exhibit 18.</p> <p>5 Now, at the bottom of page 8 you write under</p> <p>6 the header "Present," and in parentheses "May 2011,"</p> <p>7 you write, "Based on review and evaluation of</p> <p>8 investigation and remedial activities performed at</p> <p>9 the facility to date, the following opinions are</p> <p>10 presented."</p> <p>11 And then you have 1 through 10 which follows</p> <p>12 on to page 9 of your report. Are you following me</p> <p>13 there?</p> <p>14 A. Yes.</p> <p>15 Q. And is that a summary of your overall</p> <p>16 opinions concerning the station?</p> <p>17 A. For this station, yes. And then what</p> <p>18 I have attempted to perhaps -- I wouldn't say expand</p> <p>19 on, clarify my opinions, as I drafted what we have</p> <p>20 referred to as Exhibit 5, I believe, which presents</p> <p>21 22 separate opinions and addresses those opinions for</p> <p>22 each of the sites.</p> <p>23 To date, I have completed that for the 12</p> <p>24 sites that appear on Exhibit 5. And I should have</p> <p>25 that complete for all sites by next Monday.</p>	<p>1 won't go over, other than let me ask you the -- what</p> <p>2 is the general basis for your opinion there?</p> <p>3 A. It would be the detection of MTBE in</p> <p>4 soil and groundwater beneath the facility.</p> <p>5 Q. Okay. And, again, unless you have</p> <p>6 something to add, I won't retread some ground we</p> <p>7 already covered. But with regard to the basis for</p> <p>8 your opinion that TBA has been released at the</p> <p>9 facility, what is the basis?</p> <p>10 A. It would be the detection of TBA in</p> <p>11 groundwater at the facility and the additional</p> <p>12 information we discussed as part of an earlier</p> <p>13 question.</p> <p>14 Q. So we have already discussed the --</p> <p>15 to the extent that you have an opinion as to when</p> <p>16 those releases may have occurred, correct?</p> <p>17 A. Correct.</p> <p>18 Q. All right. Your next column,</p> <p>19 Mr. Brown, indicates, "MTBE has impacted soil and</p> <p>20 groundwater beneath the facility and off-site beyond</p> <p>21 the facility boundaries?"</p> <p>22 There's a lot there, so I just want to get</p> <p>23 an understanding as to what is meant by this column.</p> <p>24 For -- for this column, you've indicated</p> <p>25 MTBE has impacted soil and groundwater beneath the</p>
Page 219	Page 221
<p>1 Q. And for the station we're discussing</p> <p>2 this morning, it is the last one you have listed on</p> <p>3 Exhibit 5, right?</p> <p>4 A. Correct. Yes.</p> <p>5 Q. Okay. So with regard to your</p> <p>6 opinions concerning the station, we could work off of</p> <p>7 Exhibit 5 rather than working off of page 8 and 9 of</p> <p>8 those opinions?</p> <p>9 A. Correct. I have prepared Exhibit 5</p> <p>10 for the purpose of hopefully expediting the</p> <p>11 deposition process, and that we could go through</p> <p>12 ideally, if need be, one or all of the opinions as</p> <p>13 they relate to each station.</p> <p>14 Q. All right. Then we will attempt to</p> <p>15 do it that way, inasmuch as possible.</p> <p>16 So if you look at Exhibit 5, the last row</p> <p>17 there, again, you write "USA Gasoline 141," so at</p> <p>18 14600 Edwards Street, Westminster. And that is,</p> <p>19 again, the station that we have been discussing this</p> <p>20 morning, correct?</p> <p>21 A. That is correct, yes.</p> <p>22 Q. All right. And so your first column</p> <p>23 indicates "Releases of MTBE have occurred at the</p> <p>24 facility?" And you have a "Y" for "yes." We have</p> <p>25 already had some testimony on that as well, which I</p>	<p>1 facility, correct?</p> <p>2 A. Correct.</p> <p>3 Q. And then you also indicate "and off</p> <p>4 site beyond the facility boundaries."</p> <p>5 So you have, in some sense in your mind, two</p> <p>6 locations there --</p> <p>7 A. Correct.</p> <p>8 Q. -- is that right? Okay.</p> <p>9 And what do you mean by "off site beyond the</p> <p>10 facility boundaries"?</p> <p>11 A. That would be that MTBE is present in</p> <p>12 neither soil or groundwater and beyond the boundaries</p> <p>13 of the station itself.</p> <p>14 Q. Okay. And you had prepared a few</p> <p>15 figures for the station that was part of -- part of</p> <p>16 your initial report, and I think you reproduced them</p> <p>17 as part of Exhibit 21, right?</p> <p>18 A. Correct.</p> <p>19 Q. All right. Now, the figures in</p> <p>20 Exhibit 21 were the same thing as your figures in 18?</p> <p>21 Or were they changed in any way?</p> <p>22 A. In Figure 21 -- sorry. In</p> <p>23 Exhibit 21, the figures that we produced, for</p> <p>24 example, what we refer to as Figure 6 and Figure 7,</p> <p>25 would be similar to those that were produced as part</p>

10 (Pages 218 to 221)



## Anthony Brown

Page 254	Page 256
<p>1 additional activities, in your opinion, that need to 2 be done with regard to the Station 141?) 3 THE WITNESS: The only one that I can think 4 of would be the ongoing periodic sampling that's 5 being performed at the site by the consultants for 6 USA Gasoline. 7 BY MR. DUCHESNEAU: 8 Q. Mr. Brown, have you developed a cost 9 estimate for the additional vertical investigation 10 that you testified to today? 11 A. Yes, we have. 12 Q. All right. And could you refer that 13 to me? Well, strike that. 14 Do you have that in writing? 15 A. Yes, we do. 16 Q. All right. And where is that in 17 writing? 18 A. First of all, on page 9 of my expert 19 report, which is referred to as Exhibit 18. 20 Q. Okay. 21 A. Under Opinion No. 9 it indicates that 22 the cost of additional investigation will be no less 23 than \$79,050. And we gave a break-out of those 24 costs, I believe, as part of my expert report. 25 Do you want -- I have a copy, I know, in my</p>	<p>1 Q. Okay. And if you go to your next 2 opinion on page 9, Opinion No. 10, which indicated, 3 "The scope and costs developed for investigation and 4 remediation activities at G &amp; M Oil No. 04 and ARCO 5 1905 can be used as a basis to reasonably estimate 6 the scope and costs for the additional remediation 7 required at this facility, once additional 8 investigation has been performed." 9 I had already asked you this question, and 10 that was if this additional investigation that you've 11 opined on came up nondetect, then your opinion is 12 nothing more would need to be done, right? 13 A. That is correct. 14 Q. And then in that case, Opinion 10 15 would not apply, correct? 16 A. That is correct. 17 MR. DUCHESNEAU: Let me suggest this. Why 18 don't we go off the record to give Mr. Brown a moment 19 to call his staff. I'm coming close, but I'd like to 20 you to have the opportunity to talk to your staff in 21 case I have more examination based on whatever comes 22 out of it. I can check my notes then, and we can 23 determine -- 24 THE WITNESS: Okay. Sounds good. 25 MR. DUCHESNEAU: -- how much more I need</p>
Page 255	Page 257
<p>1 file, if you want me to get that. 2 Q. Before we get to that, maybe we 3 can -- we will do it at a break, just to try to keep 4 things rolling here. We are going at a decent pace, 5 at least. 6 A. Good. 7 Q. And maybe what we will do, if we take 8 the next break, if I could remind you just to make 9 that telephone call to your staff so we can resolve 10 that gradient question. 11 Okay. So you're referring to Opinion 9 on 12 page 9 of your initial report. This -- if you 13 know -- and if you need to, you just tell me, and you 14 can pull out your -- your other documents. 15 But, if you know, would the \$79,000 be the 16 approximate cost for the three wells you discussed or 17 the three groundwater samples you discussed earlier 18 today? 19 A. Actually, the standard costs we 20 developed for additional investigation would be for 21 CPTs and associated hydropunch samples. And there is 22 actually a standard cost based on five locations. 23 So for the USA Gasoline Station, I believe 24 only three locations would be required at this stage; 25 therefore, the costs would be somewhat less.</p>	<p>1 before we finish up. If it's okay with everybody, 2 let's go off the record. 3 THE VIDEOGRAPHER: With the approval of 4 counsel, we are going off the record. The time is 5 approximately 11:07 a.m. 6 (Recess taken.) 7 THE VIDEOGRAPHER: With the approval of 8 counsel, we are back on the record. The time is 9 approximately 11:18 a.m. This is the beginning of 10 Disc No. 2. 11 BY MR. DUCHESNEAU: 12 Q. Okay. Mr. Brown, any success in 13 getting through to your staff? 14 A. No. I left a voice mail and sent an 15 e-mail, but I have not heard back. 16 Q. Well, let me ask you it this way, 17 maybe. With regard to the question we had about the 18 difference in the gradient value in your chart 19 produced yesterday and in your initial report, 20 regardless of how that discrepancy comes out, it's 21 not going to affect your opinion that you've 22 expressed in Exhibit 5 and expressed today, is it? 23 A. I don't believe so, no. 24 Q. Okay. And to the extent that there 25 is any inconsistency between Exhibit 5 and your</p>

Anthony Brown

Page 258	Page 260
<p>1 written opinions that would be from Exhibit 1818</p> <p>2 through, I believe it's 20, would it be fair to say</p> <p>3 that what you testified to today, and as depicted in</p> <p>4 Exhibit 5, would be your most current opinion?</p> <p>5 A. That is correct.</p> <p>6 Q. So if there's any discrepancy -- and</p> <p>7 I'm not sure if there is or not -- but if there's any</p> <p>8 discrepancy, we should refer to Exhibit 5 in your</p> <p>9 testimony today, correct?</p> <p>10 A. That is correct. I believe Exhibit 5</p> <p>11 would not only be the most current, but we developed</p> <p>12 Exhibit 5 to try to clarify some of the opinions</p> <p>13 which could be construed as somewhat uncertain in the</p> <p>14 expert reports.</p> <p>15 Q. Okay. Now, going back to those CPT</p> <p>16 borings and groundwater samples that you believed</p> <p>17 should be done, in your opinion, for additional</p> <p>18 vertical characterization at the -- all right, strike</p> <p>19 that. Technical difficulties. We will go back.</p> <p>20 All right, strike that.</p> <p>21 So with regard to your opinion as to the</p> <p>22 additional three CPT borings that should be done and</p> <p>23 groundwater samples for additional information on</p> <p>24 vertical characterization at the site, do you have an</p> <p>25 opinion as to the depths at which samples should be</p>	<p>1 the extent they want.</p> <p>2 And if it's okay with you, if I have any</p> <p>3 follow-up on that, I could do it then, but I really</p> <p>4 don't think I would have much. It would just be more</p> <p>5 efficient for us all. Is that okay with you?</p> <p>6 MS. O'REILLY: Yes.</p> <p>7 MR. DUCHESNEAU: Okay.</p> <p>8 Q. All right. Mr. Brown, have we</p> <p>9 covered the gamut of your opinions today as to the</p> <p>10 station?</p> <p>11 A. I believe so.</p> <p>12 Q. There's nothing burning on your mind</p> <p>13 that we haven't covered with regard to the station?</p> <p>14 A. I cannot think of anything, no.</p> <p>15 MR. DUCHESNEAU: Okay. Well, then if that's</p> <p>16 the case, I do appreciate your time today. Good to</p> <p>17 see you.</p> <p>18 And at this point in time I have no further</p> <p>19 questions other than, as I said, subject to the --</p> <p>20 what I said as to the cost estimates.</p> <p>21 THE WITNESS: Thanks -- thank you,</p> <p>22 Mr. Duchesneau.</p> <p>23 MR. DUCHESNEAU: All right. Thank you.</p> <p>24 All right. Why don't we go off the record.</p> <p>25 THE VIDEOGRAPHER: With the approval of</p>
Page 259	Page 261
<p>1 taken?</p> <p>2 A. Yes.</p> <p>3 Q. And what are -- what is your opinion?</p> <p>4 A. I believe that groundwater samples</p> <p>5 should be taken at depths consistent with the</p> <p>6 existing sampling depths from the most recent CPTs</p> <p>7 advanced on behalf of Orange County Water District,</p> <p>8 that is, CPT U-141A, U-141B and U-141D.</p> <p>9 The specific depth in the sample would be</p> <p>10 determined in the field based on the CPT log. So it</p> <p>11 may vary by a few feet compared to the samples taken</p> <p>12 at the existing CPT locations.</p> <p>13 Q. Okay.</p> <p>14 A. And they would extend down to a depth</p> <p>15 of plus or minus 90 feet.</p> <p>16 Q. Now, you had mentioned that with</p> <p>17 regard to the cost estimates, you had an opinion that</p> <p>18 was developed, I believe it was for an ARCO Station</p> <p>19 and a G &amp; M Oil station, correct?</p> <p>20 A. Correct.</p> <p>21 MR. DUCHESNEAU: And, Counsel, what I would</p> <p>22 propose doing, if it's okay with you, to facilitate</p> <p>23 things, I -- I think I have a very few questions on</p> <p>24 that, and it may be more efficient to allow counsel</p> <p>25 for G &amp; M and ARCO to dive into those documents to</p>	<p>1 counsel, we are going off the record. The time is</p> <p>2 approximately 11:23 a.m.</p> <p>3 (Off the record.)</p> <p>4 THE VIDEOGRAPHER: With the approval of</p> <p>5 counsel, we are back on the record. The time is</p> <p>6 approximately 11:28 a.m.</p> <p>7 EXAMINATION RESUMED</p> <p>8 BY MR. COX:</p> <p>9 Q. Good morning again, Mr. Brown.</p> <p>10 A. Good morning.</p> <p>11 Q. Yesterday I was questioning you about</p> <p>12 Mr. Daus's expert report that we marked as Exhibit 3,</p> <p>13 and there were some figures to that. Do you happen</p> <p>14 to have that in front of you?</p> <p>15 A. Mr. Daus's figures?</p> <p>16 Q. Mr. Daus's figures. Only because</p> <p>17 they are the ones I happen to have brought back with</p> <p>18 me.</p> <p>19 A. Do you recall the exhibit number?</p> <p>20 Q. 3.</p> <p>21 A. It should be in that stack there.</p> <p>22 Q. 2. Exhibit 2. Figure 3.</p> <p>23 THE REPORTER: These should be in order.</p> <p>24 MR. COX: Yes. I will help you.</p> <p>25 Q. Placing Exhibit 2, Figure 3, before</p>

20 (Pages 258 to 261)

Anthony Brown

Page 367

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

IN RE: METHYL TERTIARY BUTYL ETHER ("MTBE")  
PRODUCTS LIABILITY LITIGATION  
MDL No. 1358 (SAS)

This Document Relates to:

ORANGE COUNTY WATER DISTRICT  
v. UNOCAL CORPORATION, et al.,  
Case No. 04 CIV.4968 (SAS)

---

-- -- --

MONDAY, JANUARY 2, 2012

-- -- --

Videotaped Deposition of ANTHONY BROWN,  
Expert Witness, Volume III, held at the Law Offices  
of Arnold & Porter, 777 South Figueroa Street,  
Suite 4400, Los Angeles, California, beginning at  
9:12 a.m., before Sandra Bunch VanderPol, FAPR, RMR,  
CRR, CSR #3032

-- -- --

---

GOLKOW TECHNOLOGIES, INC.  
877.370.3377 ph|917.591.5672 fax  
Deps@golkow.com



## Anthony Brown

<p style="text-align: right;">Page 440</p> <p>1 counsel, we are back on the record. The time is 2 approximately 11:15 a.m. This is the beginning of 3 Disc No. 2. 4 MR. COX: If you need to go back off, jut 5 let me know. 6 Q. We are about to move to Thrifty 368, 7 but before we leave we ARCO 6036, Mr. Brown, I just 8 want to make sure that under column 22 for ARCO 6036, 9 "Releases at the facility pose a threat to water 10 supply wells," it's your opinion more likely than not 11 that releases at the ARCO 6036 location don't pose a 12 threat to water supply wells, correct? 13 A. While it is possible that the 14 releases at ARCO 6036 pose a threat to water supply 15 wells, I have not been able to reach that conclusion 16 that it is more likely than not. 17 Q. And we probably covered this before, 18 but let me take a slightly different tack. 19 I know you can't quantify what you mean by 20 "possible," but can you describe it with any more 21 specificity than -- there's a lot of range of 22 possibilities. If so, I'd be interested in 23 additional definition around your use of the word 24 "possible." 25 MS. O'REILLY: Vague. Ambiguous.</p>	<p style="text-align: right;">Page 442</p> <p>1 don't. 2 Q. So if you looked at a site, let's say 3 ARCO 6036 since we're there, and concluded it was 4 unlikely that the site posed a threat to a drinking 5 water supply, you would still give that site -- in 6 this case ARCO 6036 -- a "P," correct? 7 A. If I could not conclude that it was 8 more likely than not, I would give it a "P." 9 Assuming, again, that I could not conclude that it 10 was not more likely than not. We're getting too many 11 negatives. 12 Q. A lot of negatives here. Let's 13 assume that you concluded that it was unlikely that 14 ARCO 6036 was a threat to drinking water supply, you 15 would still give ARCO 3036 a "P," correct? 16 MS. O'REILLY: Vague and ambiguous. 17 Go ahead. 18 THE WITNESS: It actually could get a "P" or 19 an "N." We're talking generically across all of the 20 potential sites. 21 MR. COX: Okay. 22 THE WITNESS: If I was confident enough to 23 feel that it was more likely than not that it doesn't 24 represent a threat, then it would get an "N." 25 ///</p>
<p style="text-align: right;">Page 441</p> <p>1 Overbroad. 2 THE WITNESS: And in particular you're 3 referencing this one opinion, the threat to water 4 supply wells? 5 BY MR. COX: 6 Q. Yes. The threat to water supply 7 wells that we've been spending a lot of time on. 8 A. In evaluating each of the specific 9 service stations, I would obviously look at the 10 historical and current contaminant concentration 11 data, groundwater flow direction, the remediation 12 activities that have occurred at the site. And based 13 upon that and potential data gaps that exist, I would 14 attempt to reach a conclusion that it is more likely 15 than not that the contaminants do pose a threat to 16 water supply wells. And that would be indicated by a 17 "Y" in the column for that particular question -- 18 Q. Right. 19 A. -- or it's more likely than not they 20 don't. In which case that would be indicated by an 21 "N," that I have reached that conclusion that it's 22 more likely than not that they don't. 23 However, for most of them I could not reach 24 a conclusion either way, and it's simply possible 25 that they do. And, conversely, possible that they</p>	<p style="text-align: right;">Page 443</p> <p>1 BY MR. COX: 2 Q. But if it was unlikely but you 3 couldn't conclude it was more likely than not, it 4 would get a "P"? 5 A. Correct. 6 MR. COX: All right. I think I'm beginning 7 to understand your grading scale better. Thank you. 8 Moving on to Thrifty 368. I'd like to mark 9 your expert report for Thrifty 368 as next in order. 10 Can I do that? 11 MS. WELCHANS: Yes. 12 MR. COX: Okay. 13 THE REPORTER: Exhibit 42. 14 (Exhibit No. 42 was marked.) 15 BY MR. COX: 16 Q. And, Mr. Brown, under the "Pathway 17 and Receptor Summary" section of Exhibit 42, at 18 page 12, the very first sentence states, quote, 19 "Gasoline containing MTBE was released at the 20 facility prior to February 1996, and MTBE can be 21 traced from the source area to groundwater beneath 22 the facility." Do you see that? 23 A. Yes. 24 Q. Can you tell me what pre-February 25 1996 releases you're referring to there?</p>

## Anthony Brown

<p style="text-align: right;">Page 472</p> <p>1 BY MR. COX:</p> <p>2 Q. And did you make any assumptions</p> <p>3 about the mass of the plume that extends off-site</p> <p>4 beyond Unocal 5226?</p> <p>5 A. Not the mass, no. As I indicated, we</p> <p>6 did not perform those calculations.</p> <p>7 Q. Why?</p> <p>8 MS. O'REILLY: Vague and ambiguous.</p> <p>9 Go ahead.</p> <p>10 THE WITNESS: It was not something we were</p> <p>11 asked to do as part of our retention in this matter.</p> <p>12 BY MR. COX:</p> <p>13 Q. Okay. Back to your conceptual model</p> <p>14 on getting MTBE from Thrifty 368 and/or Unocal 5226</p> <p>15 up to WM-RES2. Can you provide some more detail to</p> <p>16 me, because at this point it looks like the primary</p> <p>17 groundwater flow direction from those sites is to</p> <p>18 the -- the south, away from WM-RES2.</p> <p>19 A. That's correct. It is predominantly</p> <p>20 to the south. And the plume extends to the south and</p> <p>21 does not appear to extend in any other direction.</p> <p>22 That's within the shallow semi-perched zone.</p> <p>23 Q. All right. And you testified that</p> <p>24 WM-RES2 is maybe in the Beta, Lambda and Omicron zone</p> <p>25 aquifers?</p>	<p style="text-align: right;">Page 474</p> <p>1 contamination poses a threat.</p> <p>2 Q. Got it. But sticking with WM-RES2,</p> <p>3 it's your conclusion that more likely than not</p> <p>4 Thrifty 368 is not a threat to that well, correct?</p> <p>5 MS. O'REILLY: Vague and ambiguous.</p> <p>6 Go ahead.</p> <p>7 THE WITNESS: I would agree with that</p> <p>8 conclusion, yes.</p> <p>9 BY MR. COX:</p> <p>10 Q. Okay. And that has to do with</p> <p>11 groundwater flow direction, correct?</p> <p>12 MS. O'REILLY: Misstates the testimony.</p> <p>13 Go ahead.</p> <p>14 THE WITNESS: It actually has several</p> <p>15 things.</p> <p>16 MR. COX: All right.</p> <p>17 THE WITNESS: Firstly, the groundwater flow</p> <p>18 direction in the semi-perched aquifer is almost due</p> <p>19 south. It is likely that the groundwater flow</p> <p>20 direction in underlying aquifers would be in a</p> <p>21 generally southerly direction, perhaps in some cases</p> <p>22 southwest, southeast, but most definitely it would</p> <p>23 not be to the north.</p> <p>24 The pumping of Well WM-RES2 would create a</p> <p>25 capture zone that extends to the south, but I do not</p>
<p style="text-align: right;">Page 473</p> <p>1 A. It's in the -- that's correct.</p> <p>2 Q. Okay. Conceptually how is it that</p> <p>3 MTBE from these two locations migrate to the</p> <p>4 northwest and, in your opinion, possibly threaten</p> <p>5 WM-RES2?</p> <p>6 MS. O'REILLY: Vague. Ambiguous.</p> <p>7 Overbroad.</p> <p>8 THE WITNESS: I believe I've not indicated</p> <p>9 that the release at these stations poses a threat to</p> <p>10 that specific well.</p> <p>11 BY MR. COX:</p> <p>12 Q. Oh, okay.</p> <p>13 A. You asked me earlier what are the</p> <p>14 wells in the vicinity of this site.</p> <p>15 Q. Good point.</p> <p>16 A. My view, which perhaps I can</p> <p>17 articulate and clarify.</p> <p>18 Q. Yes, please -- please do. Because I</p> <p>19 was lost there for a little bit.</p> <p>20 A. Is that for the Thrifty 368 site, the</p> <p>21 release poses a possible threat to water supply wells</p> <p>22 in the vicinity. Realistically those water supply</p> <p>23 wells, in my view, would be those located to the</p> <p>24 south of the station. And as I indicated, I cannot</p> <p>25 conclude that it is more likely than not that the</p>	<p style="text-align: right;">Page 475</p> <p>1 believe it would extend as far as Thrifty 368. So</p> <p>2 even if contaminants from site 338 migrated</p> <p>3 vertically and entered aquifers that were within the</p> <p>4 capture zone of well WM -- sorry, entered aquifers</p> <p>5 from which WM-RES2 withdrew water, I do not believe</p> <p>6 that the contaminants, or I think it unlikely that</p> <p>7 the contaminants would be within the capture zone of</p> <p>8 that well.</p> <p>9 BY MR. COX:</p> <p>10 Q. All right. So the well that -- or</p> <p>11 wells that Thrifty 368 possibly threatens are what is</p> <p>12 reflected on Exhibit 43, SHAF-WM?</p> <p>13 A. Correct.</p> <p>14 Q. Is it your opinion that Thrifty 368</p> <p>15 threatens HB-4, HB-13, or HB-7?</p> <p>16 MS. O'REILLY: Vague. Ambiguous.</p> <p>17 Overbroad. Compound.</p> <p>18 THE WITNESS: Based upon the data I've</p> <p>19 reviewed and the analysis that I have performed, I do</p> <p>20 not believe that it is likely that the release at</p> <p>21 Thrifty 368 poses a threat to Wells HB-4, HB-7 and</p> <p>22 HB-13.</p> <p>23 BY MR. COX:</p> <p>24 Q. Do you believe it is more likely than</p> <p>25 not that Thrifty 368 poses a threat to those wells?</p>

## Anthony Brown

Page 476	Page 478
<p>1 MS. O'REILLY: Same objection. Compound.</p> <p>2 THE WITNESS: I think I just answered that</p> <p>3 by saying, no, I don't think it does.</p> <p>4 MR. COX: Okay. Thank you. I think you</p> <p>5 might have answered likely as opposed to more likely</p> <p>6 than not.</p> <p>7 THE WITNESS: Okay.</p> <p>8 MR. COX: Okay. All right. Let's take a</p> <p>9 minute or two, maybe go off the record and clean up</p> <p>10 the table as we move to Huntington Beach ARCO.</p> <p>11 THE VIDEOGRAPHER: With the approval of</p> <p>12 counsel, we are going off the record. The time is</p> <p>13 approximately 1:19 p.m.</p> <p>14 (Off the record.)</p> <p>15 THE VIDEOGRAPHER: With the approval of</p> <p>16 counsel, we are back on the record. The time is</p> <p>17 approximately 1:22 p.m.</p> <p>18 MR. COX: Okay. I'd like to mark as</p> <p>19 exhibit next in order Figure 6 to Mr. Brown's expert</p> <p>20 report for the Huntington Beach ARCO.</p> <p>21 THE REPORTER: Exhibit 51.</p> <p>22 (Exhibit No. 51` was marked.)</p> <p>23 MR. COX: And, let's see, what else do we</p> <p>24 have here?</p> <p>25 I'd like to mark as Exhibit 52 Figure 8, the</p>	<p>1 threatened more likely than not by the</p> <p>2 Huntington Beach ARCO?</p> <p>3 A. It would be Well HB-1.</p> <p>4 Q. Okay. And I believe the analytical</p> <p>5 result summary for Well HB-1 reflects that it has</p> <p>6 never had an MTBE detection, correct?</p> <p>7 A. Correct. Could you just bear with me</p> <p>8 one second --</p> <p>9 Q. Sure.</p> <p>10 A. -- with regard to the previous</p> <p>11 question.</p> <p>12 I have completed my answer to that question.</p> <p>13 Q. Okay. So, in your opinion, more</p> <p>14 likely than not the Huntington Beach ARCO is not a</p> <p>15 threat to water supply Well HB-7, correct?</p> <p>16 MS. O'REILLY: Vague and ambiguous.</p> <p>17 THE WITNESS: That's not what I concluded.</p> <p>18 BY MR. COX:</p> <p>19 Q. Okay. Tell me what you have</p> <p>20 concluded.</p> <p>21 A. As I indicated in response to a</p> <p>22 previous question, if I believe the release at a</p> <p>23 particular site is more likely a threat to nearby</p> <p>24 water wells, I have indicated that is a "Yes" in</p> <p>25 response to question 22.</p>
Page 477	Page 479
<p>1 Receptor Location Map, to Mr. Brown's expert report</p> <p>2 for the Huntington Beach ARCO.</p> <p>3 (Exhibit No. 52 was marked.)</p> <p>4 MR. COX: I would like to mark as Exhibit 53</p> <p>5 the rose chart groundwater flow direction information</p> <p>6 for the Huntington Beach ARCO.</p> <p>7 (Exhibit No. 53 was marked.)</p> <p>8 MR. COX: And I'd like to mark as Exhibit 54</p> <p>9 the rose groundwater flow information for the Unocal</p> <p>10 5123.</p> <p>11 (Exhibit No. 54 was marked.)</p> <p>12 MR. COX: That's actually 55?</p> <p>13 THE REPORTER: 54.</p> <p>14 BY MR. COX:</p> <p>15 Q. Mr. Brown, I'm assuming that your</p> <p>16 conclusion with respect to question 20 and the</p> <p>17 Huntington Beach ARCO is that it's possible that</p> <p>18 releases at the facility more likely than not pose a</p> <p>19 threat to water supply wells, correct?</p> <p>20 A. That is correct. And I believe it's</p> <p>21 question 22.</p> <p>22 Q. 22, thank you. You would think I</p> <p>23 could get that right.</p> <p>24 So I don't make the same mistake I made last</p> <p>25 time, which water supply wells, in your opinion, are</p>	<p>1 Q. Correct.</p> <p>2 A. If, based on the information I have</p> <p>3 reviewed and the analysis I have performed to date, I</p> <p>4 believe that the release at a particular station is</p> <p>5 more likely not a threat to a particular well, I have</p> <p>6 indicated an "N" to that question.</p> <p>7 If I've been unable to determine either of</p> <p>8 those situations, then I have indicated it's a</p> <p>9 "Possible." So it is possibly a threat and,</p> <p>10 conversely, it is possibly not a threat.</p> <p>11 But based on the review and the analysis I</p> <p>12 have performed to date, I haven't been able to reach</p> <p>13 the "yes" and "no" answers.</p> <p>14 Q. Okay. Well, then let me try</p> <p>15 answering it this way: Have you concluded with</p> <p>16 respect to Well HB-7, that the Huntington Beach ARCO</p> <p>17 is not a possible threat?</p> <p>18 MS. O'REILLY: Vague and ambiguous.</p> <p>19 Go ahead.</p> <p>20 THE WITNESS: Yes.</p> <p>21 BY MR. COX:</p> <p>22 Q. And have you concluded with respect</p> <p>23 to Well HB-13, that the Huntington Beach ARCO is not</p> <p>24 a possible threat to that well?</p> <p>25 MS. O'REILLY: Same objection.</p>

Anthony Brown

Page 589

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

IN RE: METHYL TERTIARY BUTYL ETHER ("MTBE")  
PRODUCTS LIABILITY LITIGATION  
MDL No. 1358 (SAS)

This Document Relates to:

ORANGE COUNTY WATER DISTRICT  
v. UNOCAL CORPORATION, et al.,  
Case No. 04 CIV.4968 (SAS)

---

-- -- --

TUESDAY, JANUARY 3, 2012

-- -- --

Videotaped Deposition of ANTHONY BROWN,  
Expert Witness, Volume IV, held at the Law Offices of  
Arnold & Porter, 777 South Figueroa Street, Suite  
4400, Los Angeles, California, beginning at 9:08  
a.m., before Sandra Bunch VanderPol, FAPR, RMR, CRR,  
CSR #3032

-- -- --

---

GOLKOW TECHNOLOGIES, INC.  
877.370.3377 ph|917.591.5672 fax  
Deps@golkow.com

## Anthony Brown

Page 634	Page 636
<p>1 Not the subject of his expert opinions.</p> <p>2 Go ahead.</p> <p>3 THE WITNESS: I could infer or perhaps</p> <p>4 speculate that it was used in some way to select</p> <p>5 bellwether sites.</p> <p>6 BY MR. CONDRON:</p> <p>7 Q. Other than Mr. Herndon and Mr. Bolin,</p> <p>8 anybody else from OCWD that you had discussions with</p> <p>9 about MTBE?</p> <p>10 MS. O'REILLY: Same instruction.</p> <p>11 Go ahead.</p> <p>12 THE WITNESS: The only other individual I</p> <p>13 recall meeting with was a Mr. Miller, Craig Miller.</p> <p>14 BY MR. CONDRON:</p> <p>15 Q. And who is Craig Miller?</p> <p>16 A. I believe he was Mr. Herndon's</p> <p>17 supervisor. He no longer works at the Orange County</p> <p>18 Water District.</p> <p>19 Q. And what did you meet with him about?</p> <p>20 A. I believe he was present at the</p> <p>21 kickoff meeting with Mr. Herndon and Mr. Bolin.</p> <p>22 Q. Okay. With regard to your report,</p> <p>23 you prepared Feasibility Studies and remediation</p> <p>24 reports regarding ARCO 1905 and G &amp; M No. 4, correct?</p> <p>25 A. Correct.</p>	<p>1 Go ahead.</p> <p>2 THE WITNESS: I do not know.</p> <p>3 BY MR. CONDRON:</p> <p>4 Q. There have been some terms we've been</p> <p>5 using the last couple of days, and I just want to</p> <p>6 make sure that I'm clear on what they mean to you,</p> <p>7 make sure they mean the same thing to you that they</p> <p>8 mean to me so that we are discussing the same thing.</p> <p>9 The first is, "delineation." What do you</p> <p>10 mean by "delineation," when you use that term?</p> <p>11 MS. O'REILLY: Asked and answered. Vague.</p> <p>12 Go ahead.</p> <p>13 THE WITNESS: "Delineation" means that one</p> <p>14 has selected sufficient samples to understand the</p> <p>15 lateral and vertical location of the contamination</p> <p>16 that has been released from a particular facility.</p> <p>17 BY MR. CONDRON:</p> <p>18 Q. And when you talk about delineation,</p> <p>19 to what level -- strike that.</p> <p>20 What level of detection or nondetection are</p> <p>21 you looking for in order to determine whether or not</p> <p>22 delineation has taken place?</p> <p>23 MS. O'REILLY: Assumes facts. Lacks</p> <p>24 foundation.</p> <p>25 Go ahead.</p>
Page 635	Page 637
<p>1 Q. Why did you select those two sites to</p> <p>2 do the reports for?</p> <p>3 MS. O'REILLY: Objection. Assumes facts.</p> <p>4 Lacks foundation.</p> <p>5 Go ahead.</p> <p>6 THE WITNESS: Those two sites were the sites</p> <p>7 where we believed there was sufficient off-site</p> <p>8 contamination that warranted remediation.</p> <p>9 For the other sites, the current data would</p> <p>10 not allow me to conclude -- or not allow me to</p> <p>11 develop a Feasibility Study or a Remedial Action Plan</p> <p>12 at this time. And for those sites we had recommended</p> <p>13 additional information be gathered for the sites.</p> <p>14 BY MR. CONDRON:</p> <p>15 Q. Did you have any discussions with</p> <p>16 anybody from Hargis?</p> <p>17 A. I personally --</p> <p>18 MS. O'REILLY: Vague and ambiguous.</p> <p>19 Go ahead.</p> <p>20 THE WITNESS: I personally did not, no.</p> <p>21 BY MR. CONDRON:</p> <p>22 Q. Do you know how Hargis selected the</p> <p>23 particular sites that they did CPT testing at?</p> <p>24 MS. O'REILLY: Vague and ambiguous. Assumes</p> <p>25 facts. Lacks foundation.</p>	<p>1 THE WITNESS: For the purpose of the</p> <p>2 assessment that we have conducted, we have considered</p> <p>3 a delineation level at the secondary MCL</p> <p>4 concentration of 5 micrograms per liter. In some</p> <p>5 instances there may be existing data that has</p> <p>6 delineated to a level somewhat higher than that, not</p> <p>7 significantly higher, where we then have concluded</p> <p>8 that that was a reasonable level of delineation and</p> <p>9 additional investigation would not be warranted in</p> <p>10 that particular direction.</p> <p>11 BY MR. CONDRON:</p> <p>12 Q. And that's for MTBE, correct?</p> <p>13 A. Correct.</p> <p>14 Q. How about for TBA?</p> <p>15 A. For TBA we considered the</p> <p>16 notification level of 12 micrograms per liter.</p> <p>17 Q. Another term that we have been using</p> <p>18 in your deposition is the term "threat." And another</p> <p>19 term I've seen in your report is "potential threat."</p> <p>20 And I want to make sure I understand what you mean by</p> <p>21 that.</p> <p>22 What do you mean when you say the word</p> <p>23 "threat" or use the term "threat?"</p> <p>24 MS. O'REILLY: Vague and ambiguous. Asked</p> <p>25 and answered.</p>

## Anthony Brown

Page 638	Page 640
<p>1 Go ahead.</p> <p>2 THE WITNESS: In the context of this work,</p> <p>3 the term "threat" would be defined as the</p> <p>4 contamination that has resulted from a release at a</p> <p>5 particular facility could potentially either impact</p> <p>6 aquifers that would be used for or potentially used</p> <p>7 for drinking water supply, and that's reflected in</p> <p>8 question or opinion 21 on my summary table.</p> <p>9 BY MR. CONDRON:</p> <p>10 Q. And that's Exhibit 36?</p> <p>11 A. Correct.</p> <p>12 Q. Okay.</p> <p>13 A. And also presents a threat to water</p> <p>14 supply wells; that is, the contamination could</p> <p>15 potentially impact the water supply well.</p> <p>16 Q. In your report you also use the term</p> <p>17 "potential threat." Do you distinguish between</p> <p>18 "potential threat" and "threat"?</p> <p>19 MS. O'REILLY: Vague and ambiguous.</p> <p>20 THE WITNESS: We define threat in one of</p> <p>21 three ways. And those would be "yes," "no" and</p> <p>22 "possible." And that's the "P," for the possible.</p> <p>23 And obviously "Y" and "N" for the "yes" and "no" on</p> <p>24 the table.</p> <p>25 As I have discussed in response to earlier</p>	<p>1 understand how you're using the term "threat." When</p> <p>2 you say that something is a threat, is it your</p> <p>3 opinion that absent some sort of affirmative action</p> <p>4 or work on the part of someone to clean up</p> <p>5 contamination, that that contamination is going to</p> <p>6 impact drinking water aquifers?</p> <p>7 MS. O'REILLY: Asked and answered. Vague</p> <p>8 and ambiguous.</p> <p>9 Go ahead.</p> <p>10 THE WITNESS: That would not be the case.</p> <p>11 We have not performed that level of analysis. It</p> <p>12 would simply be that in the absence of some form of</p> <p>13 mitigation, that the contamination could impact the</p> <p>14 well.</p> <p>15 BY MR. CONDRON:</p> <p>16 Q. So when you use the term "threat,"</p> <p>17 you haven't made a determination that the</p> <p>18 contamination is going to impact either an aquifer or</p> <p>19 a well; is that correct?</p> <p>20 MS. O'REILLY: Vague and ambiguous.</p> <p>21 Misstates testimony.</p> <p>22 Go ahead.</p> <p>23 THE WITNESS: As I've indicated in response</p> <p>24 to previous questions, as part of my work in this</p> <p>25 matter, I did not perform the level of analysis that</p>
Page 639	Page 641
<p>1 questions, if we believe that it was more likely than</p> <p>2 not the contamination posed a threat, then in</p> <p>3 response to question No. 22, the answer would be</p> <p>4 "Yes."</p> <p>5 If we believe that the contamination did not</p> <p>6 pose a threat, then the answer would be "No."</p> <p>7 If we could not determine that it was more</p> <p>8 likely than not that the contamination posed a</p> <p>9 threat, but also not determine that it was more</p> <p>10 likely than not that it did not pose a threat, then</p> <p>11 it was left as a "Possible."</p> <p>12 BY MR. CONDRON:</p> <p>13 Q. Okay. That's helpful. But in your</p> <p>14 report you actually use the term in several places</p> <p>15 "potential threat." And I'm wondering if that's the</p> <p>16 same thing as "threat," different than "threat,"</p> <p>17 something else?</p> <p>18 A. I do not recall the specific</p> <p>19 language. As I indicated yesterday, Exhibit 36 would</p> <p>20 be the opinions that I will be offering at trial.</p> <p>21 Q. So this is the latest and greatest --</p> <p>22 A. Correct.</p> <p>23 Q. -- Exhibit 36?</p> <p>24 A. Yes.</p> <p>25 Q. Okay. Let me just make sure I</p>	<p>1 would allow me to determine whether contamination</p> <p>2 would, in fact, reach a well, at what time, and at</p> <p>3 what concentration.</p> <p>4 BY MR. CONDRON:</p> <p>5 Q. Are you aware of any damaged property</p> <p>6 that OCWD owns?</p> <p>7 MS. O'REILLY: Vague. Ambiguous. Overbroad</p> <p>8 incomplete hypothetical. Potentially calls for a</p> <p>9 legal conclusion concerning "property."</p> <p>10 THE WITNESS: The term "property," are you</p> <p>11 referring to, like, real estate or equipment?</p> <p>12 BY MR. CONDRON:</p> <p>13 Q. Anything.</p> <p>14 MS. O'REILLY: Same objection, Counsel.</p> <p>15 He's not here to testify as to damage to real estate,</p> <p>16 so you need to clarify your question within the</p> <p>17 confines of his opinions.</p> <p>18 THE WITNESS: First of all, I do not know</p> <p>19 the enter realm of property that the Orange County</p> <p>20 Water District owns. So I don't think I could</p> <p>21 probably offer a specific opinion as to whether</p> <p>22 property was damaged, as I do not know the entire</p> <p>23 universe of that property.</p> <p>24 BY MR. CONDRON:</p> <p>25 Q. In your report in several places, you</p>



## Anthony Brown

Page 666	Page 668
<p>1 west.</p> <p>2 Q. And just for my purposes, when I was</p> <p>3 looking at this diagram, does this Figure 3 use</p> <p>4 something called vertical exaggeration?</p> <p>5 A. Yes --</p> <p>6 MS. O'REILLY: Vague. Ambiguous.</p> <p>7 Overbroad.</p> <p>8 THE WITNESS: Yes. It's very common in</p> <p>9 cross-sections to have the vertical scale larger than</p> <p>10 the horizontal scale.</p> <p>11 BY MR. CONDRON:</p> <p>12 Q. Okay. So on the vertical scale it</p> <p>13 looks like an inch is equal to about 20 feet, and on</p> <p>14 the horizontal scale it looks like an inch is equal</p> <p>15 to about 500 feet?</p> <p>16 A. Correct.</p> <p>17 Q. Okay. And the result of that is that</p> <p>18 things depicted graphically on the horizontal scale</p> <p>19 appear much closer to each other than things on the</p> <p>20 vertical scale?</p> <p>21 A. Essentially, yes. If one used the</p> <p>22 same scale for both horizontal and vertical and, say,</p> <p>23 from this example we used a 500-foot scale for the</p> <p>24 horizontal but the same for the vertical, you would</p> <p>25 not be able to see any of the information vertically</p>	<p>1 through to "failed to."</p> <p>2 Q. Okay. So Opinion 6, then, is -- in</p> <p>3 your report of May 28th, 2011, is no longer your</p> <p>4 opinion?</p> <p>5 A. The opinions as stated on Exhibit 36</p> <p>6 are the current opinions.</p> <p>7 Q. Okay.</p> <p>8 A. And Opinion No. 6 would, in fact,</p> <p>9 change.</p> <p>10 Q. Did something change your mind about</p> <p>11 this particular opinion since May?</p> <p>12 A. In particular, there was additional</p> <p>13 off-site investigation performed by the Orange County</p> <p>14 Water District.</p> <p>15 Q. And that's the Hargis work?</p> <p>16 A. Correct.</p> <p>17 Q. And what about that changed your</p> <p>18 opinion?</p> <p>19 A. Essentially it -- that work</p> <p>20 delineated the extent of the contamination laterally.</p> <p>21 Q. But you had that work when you</p> <p>22 prepared this report, didn't you?</p> <p>23 A. No. There was additional data that</p> <p>24 came in later.</p> <p>25 Q. Okay. What data are you talking</p>
Page 667	Page 669
<p>1 as, for example, Well 48 is only about 50 feet down.</p> <p>2 And at 500 to an inch, that means the entire well</p> <p>3 would be one-tenth of an inch. And very difficult</p> <p>4 even with these glasses to discern the information.</p> <p>5 Q. Alternatively you have a very large</p> <p>6 piece of data?</p> <p>7 A. Or would have an extended piece of</p> <p>8 paper that would run along the length of the table</p> <p>9 here.</p> <p>10 Q. Fair enough. Looking at your</p> <p>11 opinions on page 7 of your report, Mr. Brown.</p> <p>12 Specifically I wanted to look at Opinion No. 6 where</p> <p>13 it says, "Remediation performed to date has failed to</p> <p>14 effectively address on-site and/or off-site</p> <p>15 groundwater contamination and has failed to prevent</p> <p>16 off-site migration of MTBE in groundwater." Do you</p> <p>17 see that?</p> <p>18 A. Yes.</p> <p>19 Q. Based on Exhibit 36, is it now your</p> <p>20 opinion that remediation at 6502 Bolsa has</p> <p>21 effectively addressed on-site contamination?</p> <p>22 A. And off-site.</p> <p>23 Q. And off-site?</p> <p>24 A. In fact, in a copy of my report, I've</p> <p>25 actually put a red line from the word "effectively"</p>	<p>1 about?</p> <p>2 A. Subsequent to the preparation of my</p> <p>3 report, additional CPTs were advanced on behalf of</p> <p>4 the Orange County Water District. And those would be</p> <p>5 CPTs S-6502J, S-2502K and S-6502L.</p> <p>6 Q. And what are you looking at right</p> <p>7 now?</p> <p>8 A. At the beginning of the deposition I</p> <p>9 produced a Figure 6 for this site.</p> <p>10 Q. Oh, okay. I did not get that, I</p> <p>11 don't think. Or if I did, I have it and didn't</p> <p>12 appreciate that it was different than what's in your</p> <p>13 report.</p> <p>14 A. And this shows a couple of things.</p> <p>15 It shows the maximum concentrations of MTBE in</p> <p>16 groundwater as reported for each of the wells. It</p> <p>17 also color codes the wells to indicate the saturated</p> <p>18 unit they are screened within. And it also included</p> <p>19 additional data collected subsequent to the</p> <p>20 preparation of my expert report.</p> <p>21 Q. Okay. Let me see if I have that.</p> <p>22 I'm sorry. You said they were -J, -K --</p> <p>23 A. They were -K, -K and -L. Here is the</p> <p>24 figure. This was placed on the FTP site on the day</p> <p>25 prior to my deposition, and I produced copies at the</p>

Anthony Brown

Page 838

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

IN RE: METHYL TERTIARY BUTYL ETHER ("MTBE")  
PRODUCTS LIABILITY LITIGATION  
MDL No. 1358 (SAS)

This Document Relates to:

ORANGE COUNTY WATER DISTRICT  
v. UNOCAL CORPORATION, et al.,  
Case No. 04 CIV.4968 (SAS)

---

-- -- --

WEDNESDAY, JANUARY 25, 2012

-- -- --

Videotaped Deposition of ANTHONY BROWN,  
Expert Witness, Volume V, held at the Law  
Offices of Miller, Axline & Sawyer, 1050 Fulton  
Avenue, Suite 100, Sacramento, California, beginning  
at 9:17 a.m., before Sandra Bunch VanderPol, FAPR,  
RMR, CRR, CSR #3032

-- -- --

---

GOLKOW TECHNOLOGIES, INC.  
877.370.3377 ph|917.591.5672 fax  
Deps@golkow.com



Anthony Brown

Page 911	Page 913
<p>1 BY MR. JEREMIAH ANDERSON:</p> <p>2 Q. Have you ever recommended the use of</p> <p>3 monitored natural attenuation at an MTBE site in</p> <p>4 California?</p> <p>5 A. Yes. And I think we're recommending</p> <p>6 it for some of the sites here.</p> <p>7 Q. So monitored natural attenuation can</p> <p>8 be appropriate at a site, given the various factors</p> <p>9 that you evaluate?</p> <p>10 MS. O'REILLY: Vague. Ambiguous.</p> <p>11 Overbroad. Incomplete hypothetical. Assumes facts.</p> <p>12 Lacks foundation.</p> <p>13 THE WITNESS: If implemented appropriately,</p> <p>14 it can be used as a -- either a sole remedial measure</p> <p>15 or as a component to a remedial program.</p> <p>16 BY MR. JEREMIAH ANDERSON:</p> <p>17 Q. And what circumstances do you look</p> <p>18 for to evaluate to determine that monitored natural</p> <p>19 attenuation may be appropriate?</p> <p>20 MS. O'REILLY: Vague. Ambiguous.</p> <p>21 Overbroad.</p> <p>22 THE WITNESS: I think the key issues would</p> <p>23 be, firstly, the contaminant is delineated, you know</p> <p>24 where it is both laterally and vertically.</p> <p>25 ///</p>	<p>1 addressed, other than the correction you made with</p> <p>2 Mr. Adams earlier this morning regarding the</p> <p>3 commingled plume, is there anything -- any other</p> <p>4 answers to these questions for any of these stations</p> <p>5 that you need to update or change today?</p> <p>6 A. Not that I'm aware of.</p> <p>7 MS. O'REILLY: Vague. Ambiguous.</p> <p>8 Overbroad.</p> <p>9 THE WITNESS: Now, in response to certain</p> <p>10 questions in evaluating, there may be some changes,</p> <p>11 but I'm not aware of any such.</p> <p>12 BY MR. JEREMIAH ANDERSON:</p> <p>13 Q. Mr. Brown, you're familiar with the</p> <p>14 former Unocal 5399 site at 9525 Warner Avenue in</p> <p>15 Fountain Valley, correct?</p> <p>16 A. Yes.</p> <p>17 Q. Have you ever talked with the</p> <p>18 environmental consultants that worked about this site</p> <p>19 about the remediation and investigation they did at</p> <p>20 this site?</p> <p>21 MS. O'REILLY: Vague. Ambiguous.</p> <p>22 Overbroad.</p> <p>23 THE WITNESS: No, I did not. And I do not</p> <p>24 believe any active remediation has actually been</p> <p>25 implemented at the site, other than some soil</p>
Page 912	Page 914
<p>1 BY MR. JEREMIAH ANDERSON:</p> <p>2 Q. In all directions?</p> <p>3 A. Correct. Secondly, that the</p> <p>4 concentrations are low enough that natural processes</p> <p>5 should reduce those concentrations over a reasonable</p> <p>6 period of time.</p> <p>7 And, thirdly, that sufficient data has been</p> <p>8 collected to support the position that monitored</p> <p>9 natural attenuation would be effective, most notably,</p> <p>10 parameters that would allow you to conclude that</p> <p>11 biodegradation was, in fact, occurring.</p> <p>12 Q. On your second point for the</p> <p>13 contaminant MTBE, what's the level of the contaminant</p> <p>14 that you consider sufficiently low for natural</p> <p>15 attenuation to be appropriate?</p> <p>16 A. I think that --</p> <p>17 MS. O'REILLY: Vague. Ambiguous.</p> <p>18 Overbroad. Incomplete hypothetical.</p> <p>19 Go ahead.</p> <p>20 THE WITNESS: I think that's something that</p> <p>21 would have to be evaluated on a site-by-site basis.</p> <p>22 BY MR. JEREMIAH ANDERSON:</p> <p>23 Q. Exhibit -- I'm going to turn now to</p> <p>24 -5399. And before I do that, just Exhibit 36, with</p> <p>25 the 22 questions about the various sites you</p>	<p>1 excavation.</p> <p>2 BY MR. JEREMIAH ANDERSON:</p> <p>3 Q. Now, you do not have an opinion as to</p> <p>4 when MTBE gasoline was released from Unocal 5399,</p> <p>5 correct?</p> <p>6 MS. O'REILLY: Vague. Ambiguous.</p> <p>7 Overbroad. It misstates testimony.</p> <p>8 THE WITNESS: The only opinion that I would</p> <p>9 have, would be that it occurred sometime prior to the</p> <p>10 first detection of MTBE in groundwater, which was in</p> <p>11 I believe, 1996.</p> <p>12 BY MR. JEREMIAH ANDERSON:</p> <p>13 Q. And you do not have an opinion as to</p> <p>14 the total mass of MTBE that was released from Unocal</p> <p>15 5399, correct?</p> <p>16 A. No, I do not.</p> <p>17 Q. And you don't have an opinion as to</p> <p>18 the total volume of MTBE gasoline that was released</p> <p>19 from upgradient 5399, correct?</p> <p>20 MS. O'REILLY: Vague and ambiguous.</p> <p>21 THE WITNESS: That's correct.</p> <p>22 BY MR. JEREMIAH ANDERSON:</p> <p>23 Q. You do not have an opinion that</p> <p>24 Unocal 5399 is the source of alleged MTBE detections</p> <p>25 in any drinking water wells in Orange County, do you?</p>

20 (Pages 911 to 914)

## Anthony Brown

Page 915	Page 917
<p>1 MS. O'REILLY: Same objections. Incomplete</p> <p>2 hypothetical.</p> <p>3 Go ahead.</p> <p>4 THE WITNESS: I have not performed the level</p> <p>5 of analysis that would allow me to reach that kind of</p> <p>6 opinion.</p> <p>7 BY MR. JEREMIAH ANDERSON:</p> <p>8 Q. And you do not think that the alleged</p> <p>9 MTBE released from Unocal 5399 is a threat to any</p> <p>10 specific drinking water wells in Orange County,</p> <p>11 correct?</p> <p>12 MS. O'REILLY: Same objections. Misstates</p> <p>13 testimony. Misstates opinions. Misstates report.</p> <p>14 THE WITNESS: If you refer to Exhibit 35 for</p> <p>15 Unocal station 5399, question 22.</p> <p>16 MR. JEREMIAH ANDERSON: I think you meant</p> <p>17 36.</p> <p>18 THE WITNESS: Sorry, yes. Excuse me, 36.</p> <p>19 Question 22 states, "Releases at the</p> <p>20 facility pose a threat to water supply wells?"</p> <p>21 I have concluded that it is more likely than</p> <p>22 not that they do not pose such a threat.</p> <p>23 BY MR. JEREMIAH ANDERSON:</p> <p>24 Q. You have not created a feasibility</p> <p>25 plan for Unocal 5399, correct?</p>	<p>1 could not conclude that it's more likely than not.</p> <p>2 BY MR. JEREMIAH ANDERSON:</p> <p>3 Q. Okay. Looking at question 5. You</p> <p>4 think it's possible that this plume commingled with</p> <p>5 Texaco 121681, but you don't know if it's more likely</p> <p>6 than not?</p> <p>7 A. That's correct.</p> <p>8 Q. Do you think that it's possible that</p> <p>9 there's still a plume today coming from Unocal 5399</p> <p>10 that is commingled with the alleged plume from Texaco</p> <p>11 121681?</p> <p>12 MS. O'REILLY: Vague and ambiguous.</p> <p>13 Overbroad.</p> <p>14 THE WITNESS: While it's possible, I would</p> <p>15 think it unlikely.</p> <p>16 BY MR. JEREMIAH ANDERSON:</p> <p>17 Q. Questions -- let me back up.</p> <p>18 What were the maps you were just looking at</p> <p>19 there?</p> <p>20 A. Certainly, yes. I have two sets.</p> <p>21 The first are my sketches on Figures 4, for the</p> <p>22 Unocal 5399 site. And these would be what's been</p> <p>23 referred to as the isoconcentration contour that I</p> <p>24 hand drew.</p> <p>25 Q. Okay.</p>
Page 916	Page 918
<p>1 A. That's correct.</p> <p>2 Q. You have not created a Remedial</p> <p>3 Action Plan for Unocal 5399, correct?</p> <p>4 A. Correct.</p> <p>5 Q. Looking at Exhibit 36. And as other</p> <p>6 counsel have done, I'm just going to have to walk</p> <p>7 through some of the answers to these questions</p> <p>8 because of the way they are worded.</p> <p>9 Question No. 2, if I understand your chart</p> <p>10 correctly, you think that it's possible that TBA was</p> <p>11 released from this site, but you don't have an</p> <p>12 opinion as to whether or not it's more likely than</p> <p>13 not that it was released?</p> <p>14 A. That's correct. Because no analysis</p> <p>15 of TBA has been performed at this site. That's</p> <p>16 footnote P-1.</p> <p>17 Q. So you don't -- if I understand your</p> <p>18 chart correctly, you don't really have any opinions</p> <p>19 concerning the TBA that may or may not have been</p> <p>20 released from this site; is that correct?</p> <p>21 MS. O'REILLY: Objection. Misstates</p> <p>22 opinion.</p> <p>23 THE WITNESS: The only opinions I can have</p> <p>24 is that there could be a possible release and</p> <p>25 possible impact; however, in the absence of data, I</p>	<p>1 A. And the second was a similar figure</p> <p>2 showing isoconcentration contours drawn on Figure 4</p> <p>3 from the Texaco 121681 site.</p> <p>4 Q. Okay.</p> <p>5 A. Would you like to have them marked?</p> <p>6 MR. JEREMIAH ANDERSON: I do. I have got</p> <p>7 them electronically over here. I just want to make</p> <p>8 sure I'm looking at the same things.</p> <p>9 But Sandy, what exhibit are we on?</p> <p>10 THE REPORTER: It would be 115.</p> <p>11 (Exhibit Nos. 115, 116, 117 were</p> <p>12 marked.)</p> <p>13 THE WITNESS: So the court reporter has</p> <p>14 marked as Exhibit 115, Figure 4, "MTBE in</p> <p>15 Groundwater" for Unocal Site 5399, with the hand</p> <p>16 annotated isoconcentration contours.</p> <p>17 And marked as Exhibit 116, Figure 4, "MTBE</p> <p>18 in Groundwater" for Texaco 121681 with,</p> <p>19 isoconcentration contours drawn by hand.</p> <p>20 And for Exhibit 117, Figure 5, "TBA in</p> <p>21 Groundwater" for Texaco 121681, again, with</p> <p>22 isoconcentration contours drawn by hand.</p> <p>23 MR. JEREMIAH ANDERSON: Thank you.</p> <p>24 Q. Going back to Exhibit 36. Question</p> <p>25 6, if I understand your answer correctly, you think</p>

## Anthony Brown

Page 919	Page 921
<p>1 it is more likely than not that the historical MTBE 2 plume has not been laterally delineated, correct? 3 A. That is correct, yes. 4 Q. And which directions do you think 5 additional lateral delineation is needed? 6 A. It would be to the southwest of the 7 station. 8 Q. What's the flow of groundwater on 9 this site? 10 A. If you refer to the rose diagram that 11 we prepared for Unocal 5399, it would indicate that 12 the groundwater flow direction at this facility is 13 almost exclusively to the southwest. 14 MR. JEREMIAH ANDERSON: And I just have one 15 copy of this, but can you mark that, Sandy. 16 THE REPORTER: It's 118. 17 (Exhibit No. 118 was marked.) 18 MR. JEREMIAH ANDERSON: And can you hand it 19 to the witness, please. 20 Q. Does that appear to be the rose 21 diagram you guys created for this site? 22 A. Yes. 23 Q. In your question 7 you think it's 24 possible that the investigation has failed to 25 delineate on-site MTBE contamination, but you can't</p>	<p>1 on-site remediation is needed at this site, correct? 2 A. That's correct. 3 Q. And in terms of question 20, the 4 off-site remediation, again, it may need it, but you 5 can't say whether or not it's more likely than not 6 it's needed, correct? 7 A. That's correct. 8 Q. Do you think it's more likely than 9 not that there's a detached MTBE plume at this site? 10 MS. O'REILLY: Vague. Ambiguous. 11 Overbroad. 12 THE WITNESS: While it is possible, I could 13 not conclude that it's more likely than not. 14 BY MR. JEREMIAH ANDERSON: 15 Q. Under what conditions do MTBE plumes 16 detach from the source when there remains a mass of 17 MTBE still at the source site? 18 MS. O'REILLY: Vague. Ambiguous. 19 Overbroad. Incomplete hypothetical. 20 BY MR. JEREMIAH ANDERSON: 21 Q. Do you understand my question? 22 A. I think so, yes. 23 MS. O'REILLY: Incomplete hypothetical. 24 BY MR. JEREMIAH ANDERSON: 25 Q. And this would be in the Orange</p>
Page 920	Page 922
<p>1 say whether or not it's more likely than not, 2 correct? 3 A. That's correct. 4 MS. O'REILLY: Vague. Ambiguous. 5 Overbroad. 6 THE WITNESS: If you refer to footnote P-2, 7 there has actually been no analysis for MTBE at this 8 site since 1997. 9 BY MR. JEREMIAH ANDERSON: 10 Q. Right. And in 1997 is when this site 11 received closure? 12 A. I believe so, yes. Or shortly 13 thereafter. 14 Q. And, similarly, with question 12, you 15 think it's possible that MTBE exists beyond the 16 current monitoring well network, but you don't know 17 if that's more likely than not the case, correct? 18 A. That is correct. 19 Q. Now, you do think that the current 20 remediation has effectively addressed the on-site 21 MTBE contamination, correct? And that's question 14 22 A. Yes. And, as indicated, the only 23 remediation activities was an excavation performed at 24 this facility back in late 1994. 25 Q. It's your opinion that no more</p>	<p>1 County area. 2 A. Where a mass of MTBE is still present 3 to date in the area of the release, the only 4 hypothetical scenario that I could envision where a 5 detached plume would exist would be where multiple 6 releases of MTBE had occurred such that initial 7 release of MTBE migrated off-site and essentially 8 became detached from the source itself, and then 9 there was a subsequent release of MTBE which still 10 indicated detections of the contaminant on-site in 11 the source area. 12 Q. And if MTBE testing began at a site 13 in 1996 and it consistently showed that there were 14 MTBE detections on-site from 1996 to the present, 15 that would indicate that your hypothetical situation 16 wouldn't have occurred because the MTBE was always 17 on-site; is that a fair characterization? 18 MS. O'REILLY: Objection. Misstates the 19 testimony. 20 THE WITNESS: Unfortunately, no, not quite. 21 For example, one could have a release, say, in the 22 very early 1990s, when MTBE became widely used in 23 gasoline, that generated a groundwater contaminant 24 plume that migrated off-site. And then a subsequent 25 release, perhaps in the mid 1990s, could</p>

## Anthony Brown

Page 923	Page 925
<p>1 recontaminate the area of the source. And when  2 analysis of MTBE began in 1996, it would show that  3 MTBE was present on the site for the entire period of  4 the monitoring; however, we do not have any data  5 prior to 1996.  6 BY MR. JEREMIAH ANDERSON:  7 Q. Okay. And so that's a fair point.  8 You couldn't have a detached plume that  9 started detaching after '96? In other words, maybe  10 something got away before you started testing. But  11 in terms of 1996 to the present, if there have  12 consistently been detections of MTBE at the site,  13 that indicates that a plume hasn't detached from 1996  14 to the present?  15 MS. O'REILLY: It's vague. Ambiguous.  16 Overbroad. Misstates testimony.  17 THE WITNESS: In general, yes. Now,  18 obviously, if we had just, perhaps, very low  19 concentrations of MTBE present at the site, then  20 there may be a detached plume. But if the  21 concentrations were relatively significant, then one  22 would expect the off-site contamination to still be  23 contiguous with the on-site contamination.  24 BY MR. JEREMIAH ANDERSON:  25 Q. Moving back to Exhibit 36 and</p>	<p>1 Overbroad. Misstates the testimony.  2 Go ahead.  3 THE WITNESS: Not quite. I mean, as I  4 discussed earlier in response to questions relating  5 to the G &amp; M sites, there may, in fact, be very low  6 concentrations of MTBE present historically in the  7 shallow portion of the semi-perched aquifer that are  8 such that it might only be possible that deeper  9 aquifers could be impacted.  10 BY MR. JEREMIAH ANDERSON:  11 Q. But, in your opinion, that's not the  12 case at any of the sites you've looked at?  13 MS. O'REILLY: Misstates testimony.  14 THE WITNESS: No. For some we have said it  15 is possible, only possible. For some we have been  16 able to conclude that, yes, releases do, in fact,  17 pose a threat to deeper aquifers.  18 But at some sites we have only been able to  19 state that that's possible, but we have not been able  20 to conclude that it's more likely than not.  21 BY MR. JEREMIAH ANDERSON:  22 Q. And I guess my question was: Absent  23 vertical delineation, complete vertical delineation,  24 you think that every MTBE site -- let me back up.  25 Every MTBE site that has not been completely</p>
Page 924	Page 926
<p>1 question 21. Again, you think it's possible that  2 contamination from Unocal 5399 is a threat to the  3 deep aquifers, but you can't say whether or not it's  4 more likely than not that's the case, correct?  5 A. That's correct.  6 Q. And if I look at column 21, going  7 down all the sites, I see that it's your opinion at  8 each site that either contamination from that  9 particular site is a threat to the deep aquifers or  10 it's possible; is that fair?  11 A. Yes.  12 Q. What would it take for you to say  13 that an MTBE site is not a threat to the deeper  14 aquifers?  15 MS. O'REILLY: Vague. Ambiguous.  16 Overbroad. Incomplete hypothetical.  17 THE WITNESS: Vertical delineation, which is  18 absent at almost every site. In fact, it may be  19 absent at every site.  20 BY MR. JEREMIAH ANDERSON:  21 Q. So if I understand your answer  22 correctly, you think that an MTBE plume has to be  23 vertically delineated for you to determine that a  24 plume is not a threat to the deeper aquifer?  25 MS. O'REILLY: Vague. Ambiguous.</p>	<p>1 vertically delineated poses a threat to the deeper  2 aquifer, in your opinion?  3 MS. O'REILLY: Misstates opinion. Vague.  4 Ambiguous. Overbroad.  5 Go ahead.  6 THE WITNESS: No, that's not my opinion.  7 BY MR. ADAMS:  8 Q. And so you indicated on the follow-up  9 that if the contamination in the shallow aquifer is  10 so insignificant, you may be able to determine that  11 there's not a threat to the deeper aquifer, correct?  12 MS. O'REILLY: Misstates opinion.  13 THE WITNESS: If the contaminant  14 concentrations in the upper portion of the  15 semi-perched aquifer were relatively low over the  16 historical period of sampling, I may not be able to  17 conclude that it's more likely than not that deeper  18 aquifers are threatened. It is possible. And, in  19 fact, at most of the facilities I've recommended that  20 additional vertical delineation would -- is required.  21 BY MR. JEREMIAH ANDERSON:  22 Q. Okay. Just so I can make sure we're  23 on the same page.  24 You are saying that in some situations the  25 contamination in the upper/shallow aquifer is of such</p>

## Anthony Brown

Page 1019	Page 1021
<p>1 that are the subject of this litigation or this phase</p> <p>2 of the litigation, I have not been asked to give an</p> <p>3 opinion as to when specifically MTBE releases</p> <p>4 occurred; however, I have been be able to conclude</p> <p>5 that they did occur prior to the first testing of</p> <p>6 MTBE when MTBE was detected.</p> <p>7 And I have also identified incidence between</p> <p>8 1990 and 1996, the first analysis where releases may</p> <p>9 have occurred, and those releases may have, in fact,</p> <p>10 contained MTBE.</p> <p>11 BY MR. JEREMIAH ANDERSON:</p> <p>12 Q. But you don't have an opinion that</p> <p>13 it's more likely than not that the incidences you</p> <p>14 identify between 1990 and 1996 resulted in a release</p> <p>15 of gasoline containing MTBE from the site, do you?</p> <p>16 MS. O'REILLY: Vague. Ambiguous.</p> <p>17 Overbroad.</p> <p>18 THE WITNESS: The only opinion that I have</p> <p>19 reached is that the release occurred sometime prior</p> <p>20 to February of 1996.</p> <p>21 BY MR. JEREMIAH ANDERSON:</p> <p>22 Q. And, Mr. Brown, you do not have an</p> <p>23 opinion as to the mass of MTBE that was released from</p> <p>24 Unocal 5123, do you?</p> <p>25 MS. O'REILLY: Same objections.</p>	<p>1 determine the total volume of gasoline containing</p> <p>2 MTBE that was allegedly released from Unocal 5123?</p> <p>3 A. Beyond what I have just described,</p> <p>4 no.</p> <p>5 Q. Mr. Brown, you do not have an opinion</p> <p>6 that Unocal 5123 is the source of any alleged MTBE</p> <p>7 detections in drinking water wells in Orange County,</p> <p>8 do you?</p> <p>9 MS. O'REILLY: Vague. Ambiguous.</p> <p>10 Overbroad. Misstates opinions.</p> <p>11 Go ahead.</p> <p>12 THE WITNESS: I have not performed such an</p> <p>13 analysis.</p> <p>14 BY MR. JEREMIAH ANDERSON:</p> <p>15 Q. Mr. Brown, you do not have an opinion</p> <p>16 that alleged MTBE from Unocal 5123 is a threat to any</p> <p>17 specific drinking water wells in Orange County, do</p> <p>18 you?</p> <p>19 MS. O'REILLY: Same objections.</p> <p>20 THE WITNESS: I have only been able to</p> <p>21 conclude that it poses a possible threat. I have not</p> <p>22 been able to conclude that that threat is more likely</p> <p>23 than not.</p> <p>24 BY MR. JEREMIAH ANDERSON:</p> <p>25 Q. Mr. Brown, you have not created a</p>
Page 1020	Page 1022
<p>1 THE WITNESS: The only opinion I would have</p> <p>2 is that more than 33,000 pounds of gasoline has been</p> <p>3 released at this facility, as that is the amount of</p> <p>4 hydrocarbons that have been recovered as part of the</p> <p>5 remediation program.</p> <p>6 BY MR. JEREMIAH ANDERSON:</p> <p>7 Q. And is that your opinion or is that</p> <p>8 just what you understand by reading the documents</p> <p>9 that you reviewed?</p> <p>10 MS. O'REILLY: Vague. Ambiguous.</p> <p>11 Overbroad.</p> <p>12 THE WITNESS: My understanding is that is</p> <p>13 data that's been generated by the consultants working</p> <p>14 at this facility.</p> <p>15 BY MR. JEREMIAH ANDERSON:</p> <p>16 Q. But your opinion is just coming from</p> <p>17 the documents you reviewed from the consultants</p> <p>18 working at the facility; is that correct?</p> <p>19 MS. O'REILLY: Vague. Ambiguous.</p> <p>20 Overbroad.</p> <p>21 THE WITNESS: That is correct. I haven't</p> <p>22 performed any separate analysis beyond the quantities</p> <p>23 reported by the consultants working at the facility.</p> <p>24 BY MR. JEREMIAH ANDERSON:</p> <p>25 Q. Have you performed any analysis to</p>	<p>1 Feasibility Study -- or excuse me -- you have not</p> <p>2 created a Feasibility Plan for Unocal 5123, have you?</p> <p>3 A. That is correct.</p> <p>4 Q. And you have not created a Remedial</p> <p>5 Action Plan for 5123, have you?</p> <p>6 A. That is correct.</p> <p>7 Q. Looking at your expert report, B-16</p> <p>8 under the technology area. In August 1996, which is</p> <p>9 on page -- top of page 4, in the italicized</p> <p>10 portion -- and, again, if I understand your prior</p> <p>11 testimony correct, the italicized portion is your</p> <p>12 comments, correct?</p> <p>13 A. That is correct.</p> <p>14 Q. The second to the last sentence</p> <p>15 states, "The analytical results indicate that</p> <p>16 cross-screening and groundwater pumping from these</p> <p>17 wells facilitated downward migration of MTBE."</p> <p>18 Do you see that?</p> <p>19 A. Yes.</p> <p>20 Q. Can you explain to me what you meant</p> <p>21 by that?</p> <p>22 A. Yes. The monitoring wells initially</p> <p>23 installed as part of the investigation at Unocal</p> <p>24 5123, as well as groundwater extraction wells, were</p> <p>25 screened across the upper and lower saturated portion</p>

47 (Pages 1019 to 1022)



## Anthony Brown

Page 1031	Page 1033
<p>1 MS. O'REILLY: Vague and --</p> <p>2 BY MR. JEREMIAH ANDERSON:</p> <p>3 Q. -- are your opinions -- do your</p> <p>4 opinions remain the same?</p> <p>5 To be clear, do your opinions remain the</p> <p>6 same as they are listed in your expert report?</p> <p>7 A. It would require additional</p> <p>8 delineation to the west and southwest. And, once</p> <p>9 again, while we do not have data for TBA</p> <p>10 contamination in the B zone beneath Bolsa Avenue, the</p> <p>11 investigation data from the Huntington Beach ARCO</p> <p>12 site would provide delineation directly to the south.</p> <p>13 And while additional delineation to the -- to the</p> <p>14 east-southeast would be of value, I don't think I</p> <p>15 could conclude that it is more likely than not</p> <p>16 required.</p> <p>17 Q. And the answer you just gave would be</p> <p>18 for both the B and the C zones; is that correct?</p> <p>19 A. Yes, I think that's reasonable to say</p> <p>20 that.</p> <p>21 Q. Do you think that it's more likely</p> <p>22 than not that there's a detached MTBE plume from</p> <p>23 Unocal 5123?</p> <p>24 MS. O'REILLY: Vague. Ambiguous.</p> <p>25 Overbroad.</p>	<p>1 THE WITNESS: So I actually have four</p> <p>2 figures, because I have MTBE and TBA for time series</p> <p>3 at Unocal 5123.</p> <p>4 MR. JEREMIAH ANDERSON: Okay.</p> <p>5 THE WITNESS: And I have different time</p> <p>6 steps for the MTBE and TBA at Huntington Beach ARCO.</p> <p>7 So I've been referring to both sets because</p> <p>8 it gives a more complete time series data. So we</p> <p>9 will need to mark four exhibits.</p> <p>10 MR. JEREMIAH ANDERSON: Okay. Let's do</p> <p>11 that.</p> <p>12 THE WITNESS: And I apologize for the delay,</p> <p>13 but, as you know, there are a lot of wells and some</p> <p>14 are ABC, some are ULs.</p> <p>15 MR. JEREMIAH ANDERSON: Absolutely no need</p> <p>16 to apologize. We want to make sure we get your</p> <p>17 correct opinions.</p> <p>18 (Exhibit Nos. 129, 130, 131 and</p> <p>19 132 were marked.)</p> <p>20 BY MR. JEREMIAH ANDERSON:</p> <p>21 Q. Going back to Exhibit 36. Column 6</p> <p>22 and 7 you indicate that you think the current</p> <p>23 investigation has effectively delineated the on-site</p> <p>24 MTBE and TBA at this site, correct?</p> <p>25 A. That is correct. Additional on-site</p>
Page 1032	Page 1034
<p>1 BY MR. JEREMIAH ANDERSON:</p> <p>2 Q. And if I said could you think, I</p> <p>3 meant to say do you think that it's more likely than</p> <p>4 not that there's a detached MTBE plume from Unocal</p> <p>5 5123.</p> <p>6 A. While it is possible, based upon the</p> <p>7 information I have reviewed, at this time I could not</p> <p>8 conclude that it's more likely than not.</p> <p>9 Q. And do you think it's more likely</p> <p>10 than not that there's a detached TBA plume at Unocal</p> <p>11 5123?</p> <p>12 MS. O'REILLY: Vague. Ambiguous.</p> <p>13 Overbroad.</p> <p>14 THE WITNESS: Again, while it is possible,</p> <p>15 based on the data I have reviewed, I cannot conclude</p> <p>16 that it's more likely than not.</p> <p>17 MR. JEREMIAH ANDERSON: When you have been</p> <p>18 reviewing the isoconcentration maps you've created</p> <p>19 for this site, pretty extensively over the last few</p> <p>20 questions I've asked. Let's go ahead and mark those.</p> <p>21 I'm not sure what the next number is, but we</p> <p>22 will do it --</p> <p>23 THE REPORTER: 129.</p> <p>24 MR. JEREMIAH ANDERSON: 129. We can do it</p> <p>25 with a sticky.</p>	<p>1 investigation of MTBE and TBA is not required.</p> <p>2 Q. And you think it is possible that</p> <p>3 additional on-site remediation of groundwater is</p> <p>4 required at this site, but you do not have an opinion</p> <p>5 that it's more likely than not that additional</p> <p>6 on-site remediation will be required at this site,</p> <p>7 correct?</p> <p>8 MS. O'REILLY: Vague. Ambiguous.</p> <p>9 Overbroad.</p> <p>10 THE WITNESS: Based upon the information I</p> <p>11 have reviewed to date, I cannot conclude that it's</p> <p>12 more likely than not that additional on-site</p> <p>13 remediation of groundwater will be required. It is</p> <p>14 possible, but additional investigation of the deeper</p> <p>15 zones will be required prior to making such a</p> <p>16 determination that it's more likely than not.</p> <p>17 BY MR. JEREMIAH ANDERSON:</p> <p>18 Q. Where at this site would you drill</p> <p>19 the additional CPT investigation wells we have</p> <p>20 suggested?</p> <p>21 MS. O'REILLY: Objection. Vague and</p> <p>22 ambiguous. Object to the extent it calls for a</p> <p>23 instant expert opinion.</p> <p>24 Go ahead.</p> <p>25 THE WITNESS: I have not determined the</p>

## Anthony Brown

Page 1035	Page 1037
<p>1 exact locations; however, in general, they would be</p> <p>2 to the west and southwest of Unocal station 5123 as</p> <p>3 well as on-site to provide additional vertical</p> <p>4 delineation in the area of the release.</p> <p>5 BY MR. JEREMIAH ANDERSON:</p> <p>6 Q. Question 12, you do not have an</p> <p>7 opinion that it is more likely than not that</p> <p>8 additional off-site remediation is necessary at this</p> <p>9 site, correct?</p> <p>10 MS. O'REILLY: Vague. Ambiguous.</p> <p>11 Overbroad.</p> <p>12 THE WITNESS: Sorry. You're referring to</p> <p>13 question 12, and then you refer to off-site</p> <p>14 remediation?</p> <p>15 BY MR. JEREMIAH ANDERSON:</p> <p>16 Q. You know, I meant to -- that was</p> <p>17 question 20.</p> <p>18 Question 12, you do not have an opinion that</p> <p>19 MTBE exists beyond the current monitoring well</p> <p>20 network, correct?</p> <p>21 MS. O'REILLY: Misstates testimony. Vague</p> <p>22 and ambiguous.</p> <p>23 THE WITNESS: I cannot conclude that it is</p> <p>24 more likely than not, only that it is possible the</p> <p>25 MTBE contamination exists beyond the current</p>	<p>1 BY MR. JEREMIAH ANDERSON:</p> <p>2 Q. And, similarly, with column 22, you</p> <p>3 do not think it is more likely than not that MTBE</p> <p>4 from upgradient 5123 poses a threat to water supply</p> <p>5 wells, correct?</p> <p>6 MS. O'REILLY: Vague. Ambiguous.</p> <p>7 Overbroad.</p> <p>8 THE WITNESS: Yes, I'm of the same opinion,</p> <p>9 that I could not conclude that it's more likely than</p> <p>10 not that the releases pose a threat to water supply</p> <p>11 wells, only that they pose a possible threat.</p> <p>12 BY MR. JEREMIAH ANDERSON:</p> <p>13 Q. And you have not concluded that it is</p> <p>14 more likely than not that additional remediation is</p> <p>15 necessary at this site, correct?</p> <p>16 MS. O'REILLY: Same objections.</p> <p>17 THE WITNESS: That is correct. Only that</p> <p>18 additional remediation may possibly be required.</p> <p>19 BY MR. JEREMIAH ANDERSON:</p> <p>20 Q. With respect to column 22, which</p> <p>21 production wells are potentially threatened by the</p> <p>22 MTBE release allegedly from Unocal 5123?</p> <p>23 A. It would be Well HB-1, which, if you</p> <p>24 refer to Figure 8, is located approximately 700 feet</p> <p>25 to the east-southeast of Unocal 5123.</p>
Page 1036	Page 1038
<p>1 monitoring network.</p> <p>2 BY MR. JEREMIAH ANDERSON:</p> <p>3 Q. I will now ask the question I asked</p> <p>4 previously which relates to column 20. You do not</p> <p>5 have an opinion that it is more likely than not that</p> <p>6 additional off-site remediation is necessary at</p> <p>7 Unocal 5123, correct?</p> <p>8 A. Yes, based on the current</p> <p>9 information, I cannot conclude that it's more likely</p> <p>10 than not that additional off-site remediation of</p> <p>11 groundwater will be required, only that it is</p> <p>12 possible, and only after additional investigation</p> <p>13 could one determine whether additional such</p> <p>14 remediation is -- would be required.</p> <p>15 Q. And with respect to column 21, you do</p> <p>16 not have an opinion that it is more likely than not</p> <p>17 that MTBE poses a threat to the deeper aquifers,</p> <p>18 correct?</p> <p>19 MS. O'REILLY: Objection. Misstates the</p> <p>20 document and opinions.</p> <p>21 Go ahead.</p> <p>22 THE WITNESS: Yes. Once again, I cannot</p> <p>23 conclude that the releases more than likely than not</p> <p>24 pose a threat to deeper aquifers, only that they</p> <p>25 possibly pose such a threat.</p>	<p>1 Q. Any others?</p> <p>2 A. While it is possible the release</p> <p>3 poses a threat to the HB wells -4 -7, and -13, I</p> <p>4 think it is unlikely.</p> <p>5 Q. The groundwater flow at this site has</p> <p>6 most often been toward the south, southwest and</p> <p>7 southeast, correct?</p> <p>8 MS. O'REILLY: Vague. Ambiguous.</p> <p>9 Overbroad.</p> <p>10 THE WITNESS: In the A zone, it has</p> <p>11 generally ranged between southwest and east with the</p> <p>12 predominant direction to the southeast.</p> <p>13 In the B zone it's ranged between south and</p> <p>14 east, with the predominant direction to the south.</p> <p>15 And in the C zone it's ranged between</p> <p>16 southwest and southeast.</p> <p>17 And those are indicated in the rose diagram</p> <p>18 that we prepared for Unocal station 5123.</p> <p>19 BY MR. JEREMIAH ANDERSON:</p> <p>20 Q. Huntington Beach well 1 is,</p> <p>21 therefore, not downgradient from Unocal 5123,</p> <p>22 correct?</p> <p>23 MS. O'REILLY: Misstates testimony. Vague</p> <p>24 and ambiguous.</p> <p>25 THE WITNESS: The flow directions reported</p>

51 (Pages 1035 to 1038)

Anthony Brown

Page 1284

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF NEW YORK

In Re: Methyl Tertiary Butyl Ether :  
("MTBE") :  
Products Liability Litigation : MDL No. 1358 (SAS)  
\_\_\_\_\_:  
: This document relates to the :  
following case: :  
: Orange County Water District v. :  
Unocal Corp., et al., 04 CIV. 4968 :  
(SAS) : Pages 1284-1420  
\_\_\_\_\_:

- - - - -

FEBRUARY 6, 2012

- - - - -

Videotaped Deposition of ANTHONY BROWN,  
EXPERT WITNESS, VOLUME VII, held at Latham & Watkins, at  
650 Town Center Drive, Suite 2000, Costa Mesa,  
California, commencing at 1:59 p.m., on the above date,  
before Kimberly S. Thrall, a Registered Professional  
Reporter and Certified Shorthand Reporter.

Golkow Technologies, Inc.  
877.370.3377 ph | 917.591.5672 fax  
deps@golkow.com



## Anthony Brown

<p style="text-align: right;">Page 1329</p> <p>1 A. Yes, I do.</p> <p>2 Q. You have not done the evaluation necessary as</p> <p>3 of today to determine whether or not you agree or</p> <p>4 disagree with that statement, correct?</p> <p>5 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>6 Go ahead.</p> <p>7 THE WITNESS: That is correct. As I indicated</p> <p>8 earlier, I have not had an opportunity to review either</p> <p>9 the closure report or any of the analytical testing data</p> <p>10 that was collected as part of the excavation process.</p> <p>11 BY MR. ANDERSON:</p> <p>12 Q. Before issuing your rebuttal report on</p> <p>13 December 15th, 2011, did you look on GeoTracker to see</p> <p>14 what reports had recently been updated -- or uploaded</p> <p>15 for the sites you reviewed?</p> <p>16 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>17 THE WITNESS: We did review briefly the</p> <p>18 GeoTracker information, but we were unable to review</p> <p>19 the -- any additional reports given the time frame in</p> <p>20 which we had to prepare our rebuttal report.</p> <p>21 BY MR. ANDERSON:</p> <p>22 Q. And in preparing for this deposition, did you</p> <p>23 review the reports that were available on GeoTracker for</p> <p>24 the sites that you analyzed?</p> <p>25 MS. O'REILLY: Same objection. Assumes facts.</p>	<p style="text-align: right;">Page 1331</p> <p>1 BY MR. ANDERSON:</p> <p>2 Q. Well, let me just -- it appears that your</p> <p>3 opinion would be that MTBE was released from this site</p> <p>4 sometime before April 1996 when MTBE was first detected</p> <p>5 in groundwater. Is that a fair statement?</p> <p>6 A. That's correct. That would be the earliest</p> <p>7 information we would have about MTBE contamination at</p> <p>8 this site.</p> <p>9 Q. But is it fair to say you can't sit and</p> <p>10 pinpoint a particular date before April 1996 when the</p> <p>11 MTBE was first released; is that correct?</p> <p>12 MS. O'REILLY: Vague and ambiguous.</p> <p>13 Go ahead.</p> <p>14 THE WITNESS: Not an exact date, no.</p> <p>15 BY MR. ANDERSON:</p> <p>16 Q. Do you have an opinion as to the total mass of</p> <p>17 MTBE that was released from Beacon Bay, Fountain Valley?</p> <p>18 A. I've not performed that analysis.</p> <p>19 Q. And do you have an opinion as to the total</p> <p>20 volume of gasoline containing MTBE that was released</p> <p>21 from Beacon Bay, Fountain Valley?</p> <p>22 MS. O'REILLY: Vague and ambiguous.</p> <p>23 Go ahead.</p> <p>24 THE WITNESS: Again, I've not performed those</p> <p>25 calculations.</p>
<p style="text-align: right;">Page 1330</p> <p>1 Lacks foundation.</p> <p>2 THE WITNESS: Not subsequent to the preparation</p> <p>3 of my report.</p> <p>4 BY MR. ANDERSON:</p> <p>5 Q. Okay. Turning to Beacon Bay Auto Wash,</p> <p>6 Fountain Valley, you're familiar with the former</p> <p>7 Beacon Bay Car Wash, Fountain Valley site at 10035 Ellis</p> <p>8 Avenue in Fountain Valley, correct?</p> <p>9 A. I am, yes.</p> <p>10 Q. And I believe this is B10 to your expert report</p> <p>11 of the appendix. Excuse me.</p> <p>12 Have you ever spoken with the environmental</p> <p>13 consultants that oversaw the remediation at this site</p> <p>14 about your conclusions with respect to this site?</p> <p>15 MS. O'REILLY: Vague and ambiguous.</p> <p>16 THE WITNESS: No, I did not.</p> <p>17 BY MR. ANDERSON:</p> <p>18 Q. Do you have an opinion as to when MTBE was</p> <p>19 released from the Beacon Bay, Fountain Valley site?</p> <p>20 MS. O'REILLY: Vague and ambiguous.</p> <p>21 THE WITNESS: My opinions would be contained</p> <p>22 within Section 3.1 on page 8 of my expert report. Would</p> <p>23 you like me to elaborate or just leave it on the record</p> <p>24 as just the information in Section 3.1?</p> <p>25 ///</p>	<p style="text-align: right;">Page 1332</p> <p>1 BY MR. ANDERSON:</p> <p>2 Q. And do you have an opinion as to the remaining</p> <p>3 mass of MTBE -- let me reask it.</p> <p>4 Do you have an opinion as to the mass of MTBE</p> <p>5 that is remaining in the subsurface in the area</p> <p>6 immediately surrounding the Beacon Bay, Fountain Valley</p> <p>7 site?</p> <p>8 MS. O'REILLY: Vague and ambiguous as to</p> <p>9 "surrounding."</p> <p>10 THE WITNESS: I'm going to ask for that</p> <p>11 clarification because there are two other service</p> <p>12 stations in the immediate vicinity of this Beacon Bay</p> <p>13 Car Wash facility.</p> <p>14 BY MR. ANDERSON:</p> <p>15 Q. Do you have an opinion as to the mass of MTBE</p> <p>16 that remains in the ground that came from Beacon Bay,</p> <p>17 Fountain Valley?</p> <p>18 MS. O'REILLY: Vague and ambiguous as to</p> <p>19 "ground." Soil? groundwater?</p> <p>20 THE WITNESS: I've not -- excuse me. I've not</p> <p>21 performed that level of analysis.</p> <p>22 BY MR. ANDERSON:</p> <p>23 Q. Do you have an opinion that Beacon Bay is the</p> <p>24 source of any alleged MTBE or TBA detections in drinking</p> <p>25 water wells in Orange County?</p>

13 (Pages 1329 to 1332)

## Anthony Brown

Page 1333	Page 1335
<p>1 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>2 THE WITNESS: As I indicated, as part of my</p> <p>3 retention in this matter, I was not asked to determine</p> <p>4 the specific source of any MTBE detected in water supply</p> <p>5 wells.</p> <p>6 BY MR. ANDERSON:</p> <p>7 Q. Do you have an opinion that the alleged MTBE or</p> <p>8 TBA from Beacon Bay, Fountain Valley is a threat to any</p> <p>9 specific drinking water walls in Orange County?</p> <p>10 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>11 THE WITNESS: I've only been able to conclude</p> <p>12 that the release at Beacon Bay Auto Wash, Fountain</p> <p>13 Valley is a possible threat to water supply wells, but</p> <p>14 I've been able to -- unable to conclude that it's more</p> <p>15 likely than not that the release poses a threat to a</p> <p>16 water supply.</p> <p>17 BY MR. ANDERSON:</p> <p>18 Q. Have you created a feasibility plan for</p> <p>19 Beacon Bay, Fountain Valley?</p> <p>20 A. No, I have not.</p> <p>21 Q. And have you created a remedial action plan for</p> <p>22 Beacon Bay, Fountain Valley?</p> <p>23 A. No, I have not.</p> <p>24 Q. Do you have any opinions as to the manufacturer</p> <p>25 of the gasoline that was allegedly released at</p>	<p>1 immediate vicinity of the Beacon Bay Auto Wash, Fountain</p> <p>2 Valley, and the groundwater flow direction as reported</p> <p>3 at the Beacon Bay, Fountain Valley car wash. And that's</p> <p>4 the flow direction in the first saturated unit.</p> <p>5 Q. Which way does it flow in the first saturated</p> <p>6 unit?</p> <p>7 A. If you refer to the rose diagram, it's</p> <p>8 predominantly to the southwest.</p> <p>9 (Brown Exhibit 139 was marked.)</p> <p>10 BY MR. ANDERSON:</p> <p>11 Q. Let me just mark that. I'm marking as 139, the</p> <p>12 rose diagram for Beacon Bay, Fountain Valley groundwater</p> <p>13 flow direction.</p> <p>14 Is that the rose diagram that you or your</p> <p>15 office created for the Beacon Bay, Fountain Valley?</p> <p>16 A. Yes, it is.</p> <p>17 Q. Is that still your opinion, that that's the</p> <p>18 flow of the groundwater?</p> <p>19 A. Yes, it is.</p> <p>20 Q. You indicated that you looked at the monitoring</p> <p>21 wells to help you determine whether or not there was a</p> <p>22 commingled plume. It's one of the things you</p> <p>23 investigated, correct?</p> <p>24 A. Correct, yes.</p> <p>25 Q. Is there a certain time period where you think</p>
Page 1334	Page 1336
<p>1 Beacon Bay, Fountain Valley?</p> <p>2 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>3 THE WITNESS: That's not something I was asked</p> <p>4 to evaluate as part of my retention in this matter.</p> <p>5 BY MR. ANDERSON:</p> <p>6 Q. And you have no independent opinions on that</p> <p>7 sitting here today?</p> <p>8 A. I don't believe so.</p> <p>9 Q. And I think we had double negatives there.</p> <p>10 Let's just -- you don't think that you have any</p> <p>11 independent opinions as to the manufacturer of the</p> <p>12 gasoline that was allegedly released from Beacon Bay,</p> <p>13 Fountain Valley, correct?</p> <p>14 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>15 THE WITNESS: That is correct.</p> <p>16 BY MR. ANDERSON:</p> <p>17 Q. Okay. Looking at Exhibit 36, the table, you</p> <p>18 indicate that you think it's more likely than not that</p> <p>19 the plume associated with Beacon Bay, Fountain Valley</p> <p>20 has commingled with Thrifty 383 and ARCO 1912; is that</p> <p>21 correct?</p> <p>22 A. Yes, that's correct.</p> <p>23 Q. All right. And what are you basing that on?</p> <p>24 A. It would be based upon the contaminant</p> <p>25 detections in monitoring wells installed at and in the</p>	<p>1 the plumes were commingled?</p> <p>2 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>3 BY MR. ANDERSON:</p> <p>4 Q. And just so I'm clarifying my question, I'm</p> <p>5 talking about the MTBE plume.</p> <p>6 A. Based upon my interpretation of the data, it is</p> <p>7 my opinion that when MTBE was first analyzed in</p> <p>8 groundwater beneath the Beacon Bay, Fountain Valley car</p> <p>9 wash, the MTBE had already commingled with MTBE released</p> <p>10 at ARCO Station 1912.</p> <p>11 And by the year 2000, the MTBE released at the</p> <p>12 Beacon Bay Auto Wash had commingled with releases from</p> <p>13 the Thrifty Station 383.</p> <p>14 The data from November 2010 would suggest that</p> <p>15 MTBE released at the Beacon Bay Car Wash is still</p> <p>16 commingled with MTBE released from ARCO Station 1912,</p> <p>17 specifically beneath Ellis Avenue, but the MTBE that had</p> <p>18 commingled with Thrifty Station 383 had been</p> <p>19 predominantly remediated by the activities at Thrifty</p> <p>20 Station 383 such that only very low levels of MTBE had</p> <p>21 been detected in the area where the two plumes from</p> <p>22 Beacon Bay and Thrifty 383 had commingled. And I was</p> <p>23 making reference to some of my annotated figures --</p> <p>24 Q. Right.</p> <p>25 A. -- that assisted me in that evaluation.</p>

## Anthony Brown

Page 1357	Page 1359
<p>1 (Recess.)</p> <p>2 THE VIDEOGRAPHER: With the approval of</p> <p>3 counsel, we are back on the record. The time is</p> <p>4 approximately 4:08 p.m. This marks the beginning of</p> <p>5 Disk No. 2.</p> <p>6 MS. O'REILLY: I've had a discussion with the</p> <p>7 witness off the record, and we are withdrawing 141. And</p> <p>8 due to a miscommunication between Mr. Brown and myself,</p> <p>9 I understood these maps to be maps that were drawn in</p> <p>10 response to questions about CPT locations asked in his</p> <p>11 deposition, and that is not the case. So we are</p> <p>12 asserting a privilege for these two maps that have been</p> <p>13 marked as 141.</p> <p>14 MR. ANDERSON: I -- you know, we can talk about</p> <p>15 that later in terms of whether or not that's proper or</p> <p>16 not, Tracey. I would ask that if you are going to do</p> <p>17 that, that you respond to the letters that we have sent</p> <p>18 you about the inadvertent attorney-client -- well, we</p> <p>19 can talk about that off the record.</p> <p>20 But we will, of course, reserve our right to</p> <p>21 take this up with this -- with Special Master Warner</p> <p>22 and, you know, continue with this deposition later. We</p> <p>23 disagree with your position about the privileged nature</p> <p>24 of these apparent new opinions and can address them with</p> <p>25 him.</p>	<p>1 Station 383, ARCO Station 1912, and the Beacon Bay Auto</p> <p>2 Wash. I have not identified the specific locations for</p> <p>3 those specif- -- for those investigations. I was not</p> <p>4 planning to offer testimony with respect to the specific</p> <p>5 locations.</p> <p>6 Subsequent to the last day of my deposition, I</p> <p>7 have performed some additional work, but to disclose any</p> <p>8 of the details of that work would require me to disclose</p> <p>9 information that I believe to be covered by the</p> <p>10 attorney-client privileged rulings we have been</p> <p>11 discussing.</p> <p>12 BY MR. ANDERSON:</p> <p>13 Q. Turning back to Exhibit 36, which is your</p> <p>14 chart, Question 7, you think it's more likely than not</p> <p>15 that on-site MTBE was fully delineated at Beacon Bay,</p> <p>16 Fountain Valley, correct?</p> <p>17 A. Sorry. Is it question 7 you're referring to</p> <p>18 there?</p> <p>19 Q. Yes.</p> <p>20 A. Yes, that's correct.</p> <p>21 Q. And Question 19, it's your opinion that it's</p> <p>22 more likely than not that no additional on-site</p> <p>23 delineation is needed -- excuse me -- no additional</p> <p>24 on-site remediation of groundwater is needed, correct?</p> <p>25 A. That is correct.</p>
Page 1358	Page 1360
<p>1 MS. O'REILLY: And, again, Mr. Anderson, do not</p> <p>2 misstate my statements or Mr. Brown's. These are not</p> <p>3 new opinions. This is draft covered by CMO 73. And</p> <p>4 I -- as I have said for the fourth time, if Mr. Brown is</p> <p>5 given work which he intends to rely upon and testify to</p> <p>6 at trial, we will notify you. And, in fact, previously,</p> <p>7 not less than 20 minutes ago, or even less than that,</p> <p>8 you asked Mr. Brown about 141 and whether he intended to</p> <p>9 rely on these locations in his testimony at trial, and</p> <p>10 he said no. So anything that is outside the scope of</p> <p>11 what he is being presented for deposition today is</p> <p>12 privileged.</p> <p>13 BY MR. ANDERSON:</p> <p>14 Q. Mr. Brown, sitting here today, do you have an</p> <p>15 opinion as to where you would put additional CPT testing</p> <p>16 with respect to Thrifty 383?</p> <p>17 MS. O'REILLY: And I'm going to instruct the</p> <p>18 witness that he may answer if he has an opinion outside</p> <p>19 the scope of any attorney-client privileged</p> <p>20 communication. Otherwise, he's not to answer.</p> <p>21 THE WITNESS: As part of my retention in this</p> <p>22 matter and in the preparation of my expert reports</p> <p>23 and -- and in responding to questions during this</p> <p>24 deposition, I have indicated and reached the opinion</p> <p>25 that additional investigation is warranted at Thrifty</p>	<p>1 Q. It's your opinion that on-site remediation has</p> <p>2 effectively controlled the contamination, correct?</p> <p>3 MS. O'REILLY: Misstates report and testimony.</p> <p>4 BY MR. ANDERSON:</p> <p>5 Q. And I'm looking at Question 14.</p> <p>6 A. Correct. Question 14 would indicate that the</p> <p>7 remediation performed has effectively addressed the</p> <p>8 on-site groundwater contamination.</p> <p>9 Q. For Questions 12 and 13, you think it's</p> <p>10 possible that MTBE and TBA from this site exists beyond</p> <p>11 the current network, but you don't know whether it's</p> <p>12 more likely than not; is that correct?</p> <p>13 MS. O'REILLY: Vague and ambiguous.</p> <p>14 THE WITNESS: That is correct.</p> <p>15 BY MR. ANDERSON:</p> <p>16 Q. As we have discussed, there's been significant</p> <p>17 CPT testing around these sites, correct?</p> <p>18 A. Correct.</p> <p>19 Q. The highest MTBE detection in any of the CPT</p> <p>20 tests -- or in any of the CPT borings around this site,</p> <p>21 do you know what it was?</p> <p>22 A. For the CPT investigations performed on behalf</p> <p>23 of the Orange County Water District, the highest</p> <p>24 detected MTBE concentration in the vicinity of the three</p> <p>25 service stations we have been discussing would be 2.3</p>

## Anthony Brown

Page 1361	Page 1363
<p>1 micrograms per liter at a depth of 35 feet at sample</p> <p>2 location A1912M.</p> <p>3 Q. Okay. And -- can I see one of those maps</p> <p>4 again, please? For the record, you're looking at former</p> <p>5 Exhibit 141 when you were answering that question; is</p> <p>6 that correct?</p> <p>7 A. That is correct.</p> <p>8 Q. Do you know whether or not --</p> <p>9 MS. O'REILLY: Don't use that.</p> <p>10 BY MR. ANDERSON:</p> <p>11 Q. -- the results from the CPT tests from A1912M</p> <p>12 have been produced in this matter?</p> <p>13 MS. O'REILLY: Can you give him a copy? I</p> <p>14 don't want him to use 141.</p> <p>15 Assumes facts. Lacks foundation. Calls for</p> <p>16 speculation.</p> <p>17 THE WITNESS: The -- I do not know as I sit</p> <p>18 here whether specific laboratory reports for the</p> <p>19 sampling at A1912M have been reduced to date. I do know</p> <p>20 that the results have been produced. As I indicated,</p> <p>21 the figures that we've previously had marked as</p> <p>22 Exhibit 141 were provided earlier in this deposition</p> <p>23 without the green annotations that have been the subject</p> <p>24 of the last hour's discussion or so.</p> <p>25 ///</p>	<p>1 the current data.</p> <p>2 BY MR. ANDERSON:</p> <p>3 Q. And so in the upgradient and cross-gradient</p> <p>4 directions, it's basically a site-by-site evaluation, is</p> <p>5 what you need -- would need to look at to determine what</p> <p>6 you think the isoconcentration level needs to be to have</p> <p>7 it delineated in that direction?</p> <p>8 A. For all of the sites in all of the directions.</p> <p>9 It still would be site specific. But I think</p> <p>10 particularly in the upgradient and cross-gradient</p> <p>11 directions, a site-specific analysis might allow one to</p> <p>12 complete delineation at a concentration above the</p> <p>13 detection limit.</p> <p>14 Q. You indicate that this Question 8 and 11, you</p> <p>15 do not think that this site has been vertically</p> <p>16 delineated, correct? We're talking about Beacon Bay,</p> <p>17 Fountain Valley.</p> <p>18 A. That is correct.</p> <p>19 Q. Doesn't the CPT testing vertically delineate</p> <p>20 it?</p> <p>21 MS. O'REILLY: Vague and ambiguous as to "CPT</p> <p>22 testing." ARCO did CPT testing. Are you talking about</p> <p>23 Hargis or ARCO?</p> <p>24 BY MR. ANDERSON:</p> <p>25 Q. Yeah. Let me -- the CPT testing in the area</p>
Page 1362	Page 1364
<p>1 BY MR. ANDERSON:</p> <p>2 Q. Okay.</p> <p>3 A. And those figures would have had the data</p> <p>4 for -- all the data results from A1912M.</p> <p>5 Q. To what isoconcentration do you intend to</p> <p>6 delineate any of the MTBE plumes surrounding any of the</p> <p>7 sites that you have -- let me back up.</p> <p>8 To what isoconcentration do you think the sites</p> <p>9 that you look at -- looked at need to be delineated to?</p> <p>10 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>11 THE WITNESS: That is probably something that</p> <p>12 would have have to be addressed on a site-specific</p> <p>13 basis. However, in general, for those sites that have</p> <p>14 extensive MTBE plumes that have migrated some distance</p> <p>15 off-site, for the distal end of the plume, that's the</p> <p>16 downgradient leading edge of the plume, I would</p> <p>17 recommend delineation down to a detection limit of</p> <p>18 .5 micrograms per liter. That is a delineation to a</p> <p>19 nondetect level.</p> <p>20 In areas more approximate to the release</p> <p>21 location, in cross-gradient and upgradient directions, I</p> <p>22 believe delineation could be considered achieved at a</p> <p>23 concentration above that level if the contaminant trend</p> <p>24 data in that direction would indicate that a nondetect</p> <p>25 concentration would be likely some short distance beyond</p>	<p>1 surrounding the Beacon Bay site.</p> <p>2 A. In the area surrounding the Beacon Bay site,</p> <p>3 that is correct. The CPT data collected on behalf of</p> <p>4 the Orange County Water District does delineate vertical</p> <p>5 contamination in the area surrounding Beacon Bay.</p> <p>6 However, I still believe there's value in collecting</p> <p>7 some additional CPT data at depth in the immediate</p> <p>8 vicinity of the release.</p> <p>9 Q. So I'm clear, you think that there needs to be</p> <p>10 CPT testing on site to delineate it vertically</p> <p>11 completely; is that right?</p> <p>12 A. Or very close to the site.</p> <p>13 Q. Okay. Question 20, you think it's possible</p> <p>14 that off-site remediation will be needed at this site,</p> <p>15 but you don't know whether it's more likely than not.</p> <p>16 Is that right -- fair?</p> <p>17 A. That is correct.</p> <p>18 Q. And the depictions in Exhibit 140 are --</p> <p>19 contain your opinions about how far off-site the MTBE</p> <p>20 and TBA plumes allegedly extend from this site. Is that</p> <p>21 fair?</p> <p>22 A. No. That's not what these figures depict on</p> <p>23 Exhibit 140.</p> <p>24 Q. Okay. Do you have an opinion as to how far</p> <p>25 off-site the MTBE plume extends from Beacon Bay,</p>

## Anthony Brown

<p style="text-align: right;">Page 1365</p> <p>1 Fountain Valley?</p> <p>2 A. The current extent of MTBE in groundwater</p> <p>3 related to a release at the Beacon Bay Auto Wash in my</p> <p>4 opinion would extend no more than 150 feet off-site.</p> <p>5 Q. In which direction?</p> <p>6 A. In a predominantly southwesterly direction.</p> <p>7 Q. Do you have an opinion as to how far off-site</p> <p>8 the TBA plume allegedly extends from Beacon Bay,</p> <p>9 Fountain Valley?</p> <p>10 A. About the same distance.</p> <p>11 Q. Again, in the southwest direction?</p> <p>12 A. Correct.</p> <p>13 Q. And looking at your chart again, you think it's</p> <p>14 possible that contamination from this site poses a</p> <p>15 threat to deeper aquifers, but you don't have an opinion</p> <p>16 as to whether it's more likely than not?</p> <p>17 A. That is correct.</p> <p>18 Q. In your opinion, which drinking water</p> <p>19 production wells are possibly threatened by a release</p> <p>20 from Beacon Bay, Fountain Valley?</p> <p>21 MS. O'REILLY: Vague and ambiguous.</p> <p>22 THE WITNESS: The only water supply wells that</p> <p>23 could possibly be threatened by a release at the</p> <p>24 Beacon Bay Car Wash are those indicated on page 7 of my</p> <p>25 expert report, and in particular Well A1-HB.</p>	<p style="text-align: right;">Page 1367</p> <p>1 flow data. We do not have groundwater flow information</p> <p>2 for deeper saturated units.</p> <p>3 Q. Have any of those four wells I just mentioned</p> <p>4 had detections of MTBE or TBA?</p> <p>5 A. Not that I'm aware of.</p> <p>6 Q. Are OCWD-D1, OCWD-D3 and OCWD-D4 production</p> <p>7 wells, to your -- drinking water production wells, to</p> <p>8 your knowledge?</p> <p>9 MS. O'REILLY: Vague and ambiguous.</p> <p>10 THE WITNESS: I believe they are, yes.</p> <p>11 BY MR. ANDERSON:</p> <p>12 Q. Do you know which water purveyor they're</p> <p>13 associated with?</p> <p>14 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>15 THE WITNESS: I do not know the purveyor for</p> <p>16 Well A1-HB. While I do not know specifically the</p> <p>17 purveyor for the other three wells you referenced --</p> <p>18 OCWD-D1, OCWD-D3 or OCWD-D4 -- the acronym would</p> <p>19 coincide with the District's acronym, Orange County</p> <p>20 Water District.</p> <p>21 BY MR. ANDERSON:</p> <p>22 Q. Okay.</p> <p>23 A. And production at these wells has ranged from</p> <p>24 as little as 9 acre-feet per month at Well A1-HB to as</p> <p>25 much as 113 acre-feet per month at OCWD-D3.</p>
<p style="text-align: right;">Page 1366</p> <p>1 BY MR. ANDERSON:</p> <p>2 Q. So looking at page 4 of your report, the last</p> <p>3 bullet point where you identify GKAW-FV2 as the nearest</p> <p>4 potentially vulnerable production well, that's no longer</p> <p>5 your opinion today?</p> <p>6 A. No. It should include that well. I apologize.</p> <p>7 It's very difficult to see the green symbols on</p> <p>8 Figure 8. They sort of blend in with the background.</p> <p>9 Q. Okay. All right. Well, we'll start with</p> <p>10 GKAW-FV2 is not in the direction of groundwater,</p> <p>11 correct, from Beacon Bay, Fountain Valley?</p> <p>12 A. In the first saturated unit beneath the</p> <p>13 Beacon Bay, Fountain Valley site, groundwater flow is</p> <p>14 predominantly in a southwesterly section. Well GKAW-FV2</p> <p>15 is located to the northwest of the Beacon Bay Car Wash.</p> <p>16 Q. Do you know if there's ever been any detections</p> <p>17 of MTBE or TBA in GKAW-FV2?</p> <p>18 A. Not that I'm aware of.</p> <p>19 Q. Looking at the wells that you identify on</p> <p>20 page 7, which are A1-HB, OCWD-D1, OCWD-D3, OCWD-D4, are</p> <p>21 any of those wells in the direction of groundwater flow</p> <p>22 from Beacon Bay, Fountain Valley?</p> <p>23 A. Those wells would not be downgradient of</p> <p>24 Beacon Bay, Fountain Valley in the first saturated unit,</p> <p>25 which is the only unit for which we have groundwater</p>	<p style="text-align: right;">Page 1368</p> <p>1 Q. But Orange County Water District is not a water</p> <p>2 provider, is it?</p> <p>3 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>4 THE WITNESS: That's my understanding. They</p> <p>5 may simply be referenced as that because they are on or</p> <p>6 close to the Orange County Water District facility.</p> <p>7 BY MR. ANDERSON:</p> <p>8 Q. Okay.</p> <p>9 A. As I indicated, I do not know specifically who</p> <p>10 owns those wells.</p> <p>11 Q. Have you performed any analysis to determine</p> <p>12 how long a release from Beacon Bay, Fountain View [sic]</p> <p>13 would take to get to any of the wells that you have</p> <p>14 identified as possibly threatened?</p> <p>15 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>16 THE WITNESS: That's not an analysis I was</p> <p>17 asked to perform as part of my retention in this matter.</p> <p>18 BY MR. ANDERSON:</p> <p>19 Q. And are you able to quantify when an release --</p> <p>20 when an alleged release from Beacon Bay, Fountain Valley</p> <p>21 might impact any of the water wells you've identified as</p> <p>22 being possibly threatened by release from the site?</p> <p>23 A. Again --</p> <p>24 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>25 THE WITNESS: Again, such an analysis was not</p>



## Anthony Brown

Page 1373	Page 1375
<p>1 Go ahead.</p> <p>2 THE WITNESS: Not that I'm aware.</p> <p>3 BY MR. ANDERSON:</p> <p>4 Q. A few more lines down, it says, "Are drinking</p> <p>5 water wells affected?"</p> <p>6 Do you see that?</p> <p>7 A. Yes, I do.</p> <p>8 Q. Have you ever told -- and the answer is "No."</p> <p>9 Do you see that?</p> <p>10 A. Correct.</p> <p>11 Q. Have you ever told the Orange County Health</p> <p>12 Care Agency you disagree with that conclusion?</p> <p>13 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>14 Calls for speculation.</p> <p>15 BY MR. ANDERSON:</p> <p>16 Q. And let me just back up. You don't know --</p> <p>17 well, you don't have an opinion that it's more likely</p> <p>18 than not that any drinking water wells are affected,</p> <p>19 correct?</p> <p>20 MS. O'REILLY: Vague. Ambiguous.</p> <p>21 THE WITNESS: I'm not aware of any drinking</p> <p>22 water wells in the immediate vicinity of the Beacon Bay</p> <p>23 fountain Valley car wash where MTBE has been detected to</p> <p>24 date.</p> <p>25 ///</p>	<p>1 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>2 Assumes facts. Lacks foundation.</p> <p>3 THE WITNESS: With respect to this station, no.</p> <p>4 BY MR. ANDERSON:</p> <p>5 Q. And the following sentence, "The reduced level</p> <p>6 of contamination that remains at this site does not</p> <p>7 present a threat to human health and the environment."</p> <p>8 Do you disagree with that statement?</p> <p>9 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>10 Calls for speculation. Exceeds the scope of his</p> <p>11 designation.</p> <p>12 Go ahead.</p> <p>13 As to agree or disagree with Orange County</p> <p>14 Health Care Agency.</p> <p>15 THE WITNESS: As part of my retention in this</p> <p>16 matter, I did not evaluate the threat to human health.</p> <p>17 With respect to water supply wells, I could only</p> <p>18 conclude that the release poses a possible threat to</p> <p>19 those wells. I could not conclude that it was more</p> <p>20 likely than not.</p> <p>21 BY MR. ANDERSON:</p> <p>22 Q. So if I understand your opinion with respect to</p> <p>23 this sentence, you can't comment on the threat to human</p> <p>24 health, but as to the threat to the environment, you</p> <p>25 haven't been able enough to conclude that it's more</p>
Page 1374	Page 1376
<p>1 BY MR. ANDERSON:</p> <p>2 Q. So you agree with that conclusion, correct?</p> <p>3 MS. O'REILLY: Misstates testimony.</p> <p>4 Argumentative.</p> <p>5 THE WITNESS: If one interprets "affected" to</p> <p>6 mean impacted, then I would agree with it, yes.</p> <p>7 BY MR. ANDERSON:</p> <p>8 Q. Do you have an opinion as to whether or not</p> <p>9 surface water was affected by a release from Beacon Bay,</p> <p>10 Fountain Valley?</p> <p>11 MS. O'REILLY: Did you say "surface water"?</p> <p>12 MR. ANDERSON: Yes. The next question on</p> <p>13 there.</p> <p>14 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>15 Exceeds the scope of his designation.</p> <p>16 THE WITNESS: I've not evaluated that as part</p> <p>17 of my retention in this matter.</p> <p>18 BY MR. ANDERSON:</p> <p>19 Q. On the following page, towards the bottom, the</p> <p>20 last paragraph before the bullet point begins,</p> <p>21 "Monitoring has shown the contaminated groundwater plume</p> <p>22 to be stable and attenuating."</p> <p>23 Do you see that?</p> <p>24 A. Yes.</p> <p>25 Q. Do you disagree with that conclusion?</p>	<p>1 likely than not that this conclusion from OCHCA is</p> <p>2 incorrect? Is that a fair statement?</p> <p>3 MS. O'REILLY: Argumentative. Compound.</p> <p>4 Unintelligible. Vague. Ambiguous. Overbroad.</p> <p>5 Incomplete hypothetical.</p> <p>6 THE WITNESS: As part of my retention in this</p> <p>7 matter, I was not asked to evaluate the overall threat</p> <p>8 to the environment as a whole. I've offered opinions as</p> <p>9 to the threat the contamination poses to water supply</p> <p>10 wells. And for this particular station, I could only</p> <p>11 conclude that there is a possible threat, but I would</p> <p>12 not conclude that it's more likely than not.</p> <p>13 BY MR. ANDERSON:</p> <p>14 Q. On the following page, the last bullet point up</p> <p>15 at the top says, "Natural attenuation will continue to</p> <p>16 address the remaining concentration levels with time."</p> <p>17 Do you see that?</p> <p>18 A. Yes.</p> <p>19 Q. Do you disagree with that conclusion?</p> <p>20 MS. O'REILLY: Vague. Ambiguous. Overbroad.</p> <p>21 Exceeds the scope of his designation to the extent he</p> <p>22 was not asked to agree or disagree with Orange County</p> <p>23 Health Care Agency.</p> <p>24 THE WITNESS: With respect to MTBE in</p> <p>25 groundwater that was sourced from a release at the</p>

Anthony Brown

Page 1377	Page 1379
<p>1 Beacon Bay, Fountain Valley car wash, I would agree with</p> <p>2 that statement.</p> <p>3 BY MR. ANDERSON:</p> <p>4 Q. Turning to the second page up at the top, it's</p> <p>5 got the before-and-after chart with what the MTBE</p> <p>6 detections in water were before, and then it's got the</p> <p>7 after detections. It lists 6.77 parts per million, not</p> <p>8 billion, as the before concentration, and less than</p> <p>9 0.005 parts per million after.</p> <p>10 Do you see that?</p> <p>11 A. Yes, I do.</p> <p>12 Q. That's a significant decrease in the MTBE</p> <p>13 detections at this site, correct?</p> <p>14 MS. O'REILLY: Incomplete hypothetical.</p> <p>15 Overbroad -- only one detection. Vague. Ambiguous.</p> <p>16 Lacks foundation.</p> <p>17 THE WITNESS: The data you've been referring to</p> <p>18 may, in fact, be incorrect as to the highest MTBE</p> <p>19 concentration before and after. However, in general,</p> <p>20 significant reductions in MTBE concentrations have been</p> <p>21 observed at monitoring wells at the Beacon Bay, Fountain</p> <p>22 valley car wash.</p> <p>23 BY MR. ANDERSON:</p> <p>24 Q. This case closure summary was signed by Joyce</p> <p>25 Krau at the OCHCA.</p>	<p>1 "Thank you for your cooperation throughout this</p> <p>2 investigation."</p> <p>3 Do you see that?</p> <p>4 A. Yes.</p> <p>5 Q. Do you have any information that would indicate</p> <p>6 that the responsible party did not act cooperatively</p> <p>7 with OCHCA in this site investigation?</p> <p>8 MS. O'REILLY: Calls for speculation.</p> <p>9 Overbroad. Vague. Ambiguous. Lacks foundation.</p> <p>10 Assumes facts. Exceeds the scope of this witness's</p> <p>11 designation, particularly with respect to whether or not</p> <p>12 regulatory compliance was achieved.</p> <p>13 THE WITNESS: I cannot recall of such.</p> <p>14 BY MR. ANDERSON:</p> <p>15 Q. The following sentence says, "Your willingness</p> <p>16 and promptness in responding to our inquiries concerning</p> <p>17 the former underground storage tanks are greatly</p> <p>18 appreciated."</p> <p>19 Do you see that?</p> <p>20 A. Yes, I do.</p> <p>21 Q. And do you have any information that would</p> <p>22 indicate to you that the responsible party was unwilling</p> <p>23 or tardy in responding to OCHCA's inquiries concerning</p> <p>24 the former underground storage tanks at this site?</p> <p>25 MS. O'REILLY: Overbroad given you've only</p>
Page 1378	Page 1380
<p>1 Are you familiar with Ms. Krau?</p> <p>2 A. Yes.</p> <p>3 Q. Do you think her to be a competent regulator?</p> <p>4 MS. O'REILLY: Calls for speculation. Assumes</p> <p>5 facts. Lack foundation. Exceeds the scope of his</p> <p>6 designation in this matter.</p> <p>7 THE WITNESS: Yes.</p> <p>8 BY MR. ANDERSON:</p> <p>9 Q. And do you know Ken Williams?</p> <p>10 A. Yes.</p> <p>11 Q. And you think him to be a competent regulator</p> <p>12 as well, correct?</p> <p>13 A. Yes.</p> <p>14 MS. O'REILLY: Calls for -- hold on. Calls for</p> <p>15 speculation. Assumes facts. Lacks foundation. Exceeds</p> <p>16 the scope of his designated testimony in this matter.</p> <p>17 (Brown Exhibit 143 was marked.)</p> <p>18 BY MR. ANDERSON:</p> <p>19 Q. Let me hand you -- I'm out of those things.</p> <p>20 Oh, no, I'm not. I have got 143 here. Let me hand you</p> <p>21 Exhibit 143. Exhibit 143 is an April 19, 2006 letter</p> <p>22 from Steven Wong at OCHCA to Patrick Shea of Beacon Bay</p> <p>23 Enterprises. The subject is: "Remedial Action</p> <p>24 Completion Certification."</p> <p>25 The second sentence in the first paragraph,</p>	<p>1 shown him one document, one -- one excerpt. He's got</p> <p>2 pages and pages of notes.</p> <p>3 MR. ANDERSON: I don't need a speaking -- we</p> <p>4 don't need speaking objections.</p> <p>5 MS. O'REILLY: Vague. Ambiguous. Calls for</p> <p>6 speculation. Lacks foundation. Assumes facts. And</p> <p>7 exceeds the scope of his designation as he was not</p> <p>8 retained to opine on the parties' compliance with</p> <p>9 Orange County Health Care Agency requests or</p> <p>10 regulations.</p> <p>11 THE WITNESS: As part of my retention in this</p> <p>12 matter, I've not identified such instances.</p> <p>13 BY MR. ANDERSON:</p> <p>14 Q. You understand this lawsuit was filed in 2003,</p> <p>15 correct?</p> <p>16 MS. O'REILLY: Vague and ambiguous.</p> <p>17 THE WITNESS: I do not recall the specific</p> <p>18 date, but that sounds reasonable.</p> <p>19 BY MR. ANDERSON:</p> <p>20 Q. Do you know whether or not OCWD objected to the</p> <p>21 closure of this site in April 2006?</p> <p>22 MS. O'REILLY: Objection. Vague. Ambiguous.</p> <p>23 Overbroad. Assumes facts. Exceeds the scope of his</p> <p>24 designation.</p> <p>25 THE WITNESS: I don't know.</p>

25 (Pages 1377 to 1380)